

ASPECTS OF THE GRAMMAR
OF
MAORI

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ABSTRACT

After brief discussions of the data used, the state of the Maori language in New Zealand today, and a brief review of previous scholarship on the Maori language, an outline of the major features of the grammar of Maori is provided. The structure of noun phrases, verb phrases and sentences is discussed. Three types of case grammar - Fillmore's, Anderson's and Dik's - are then examined to see how they account for the prepositions of Maori. It is concluded that none of the three has significant advantages over the others, since all raise problems in the same areas, especially those of Agency, while all appear to provide worthwhile insights into the area of Location. In the following chapter, Relational Grammar is outlined, and it is shown that this type of theory also leads to the discovery of important grammatical properties of Maori. Keenan's list of Subject properties forms the basis of an attempt to settle the debate on the nature of the passive in Maori, and it is shown that the passive subject has all the hallmarks of a derived subject. An attempt is also made to shed light on the grammatical relations of the actor-emphatic construction in the same way. A lengthy discussion of relativization reveals a great deal of complexity, and points to a number of problems for Relational Grammar in general, and for Keenan and Comrie's proposals on relativization universals in particular. A discussion of the grammatical relation Direct Object in Maori leads to the conclusion that such a category exists, but that it is probably more restricted than many previous grammarians have implied. In the conclusion, it is shown that both

case relations and grammatical relations are of importance in accounting for the grammar of Maori, and it is tentatively suggested that Subject and Direct Object are the only significant grammatical relations, and that the most useful case relations are those which make distinctions amongst oblique NPs.

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DECLARATION

This thesis was composed by myself, and the work recorded in it is my own.

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1.0 Aims

In the course of this work, an attempt is made to throw light on certain central aspects of the syntax of Maori using the insights provided by two contrasting approaches to the description of syntactic systems: Case Grammar and Relational Grammar. This in turn provides some evidence which can be used to assess the value of each of these approaches to syntactic description.

The impetus to study the syntax of Maori derived from a number of factors. Firstly, as a learner of the language, I found that I asked many questions to which the existing grammars provided unsatisfactory answers - or no answers at all. Secondly, I found that I was a more successful learner than many, because the insights of Case Grammar and Relational Grammar helped me to formulate useful hypotheses about the structure of Maori, and although many of these initial hypotheses were crude, and have been refined in the course of the research reported here, it appeared that an approach to Maori syntax based on such theories would prove revealing. A second set of factors relates to the position of Maori in New Zealand today (see further 1.2): there is a current upsurge of interest in the language, so that many people from a wide variety of backgrounds and age-groups want to learn the language. There is an inadequate supply of teachers to meet this demand, and it was hoped that the results of a study such as this could eventually be made available to more advanced

learners, and - more importantly - to prospective teachers, and that it would contribute to the success of the Maori language programme.

The choice of Case Grammar and Relational Grammar, as opposed to other possible frameworks, was motivated largely by the kinds of "rules" I found useful as a learner. Thus I found that case notions such as Source and Goal provided concepts which unified the description of superficially diverse phenomena: Source enabled me to see that i as a preposition equivalent to "because" and i as a preposition for the causer in certain sentence types might be two manifestations of the same "rule", i marks Source, rather than two unrelated facts to be learnt in isolation. Similarly, it became clear that Subjects in Maori are frequently treated distinctly from other kinds of NP by the syntactic rules - Subjects, for instance, can be fronted using the marker ko. Thus when the material on Relational Grammar eventually appeared in print, it provided a framework which seemed well suited to the investigation of such hypotheses. This is not to deny the possibility that other approaches to linguistic description also have insights to provide. The justification of the choice of frameworks lies purely in the positive contributions of each to an understanding of some of the problems of Maori syntax, and no attempt has been made to evaluate them with respect to further possible approaches.

1.1 The Data

Because of the state of the Maori language in New Zealand

today, it did not seem advisable to attempt the study on the basis either of recordings of the language, or of informant elicitation, for reasons which will become clear in 1.2. On the other hand, it was plain that if a description of modern Maori was required, then the data base could not be exclusively that of the older texts which have often been cited (see e.g. Clark, 1973; Chung, 1978). As one of the aims was to provide a description of use in teaching, it was decided that some of the material most widely used for this purpose would provide a suitable source of basic data, which could then be supplemented from a variety of other sources as required. The textbooks Te Rangatahi I & II by J. R. Waititi thus form the basis for this study. (Bibliographical information for the sources of data is to be found in Appendix C.) The lessons in Volume II, in particular, are regarded as fine examples of modern Maori prose, and have been widely used as a source of linguistic data (e.g. by Biggs, Chung, Sinclair and Reedy). In addition, certain sections of Biggs et al (1967) were used, and also sections from a reader used at Victoria University of Wellington (mimeograph). These sources provided material based on other dialects, and served to indicate the limitations of the Waititi texts. The major limitation, as with all text-based studies, was the gaps (accidental or otherwise) which revealed themselves as the analysis progressed. Certain constructions, in particular more complex ones, were not well exemplified, and where such constructions proved crucial to the argumentation here, it was necessary to obtain more data. Textual searches (for which

Te Wharekura 6, 8, 9, 12 and 14 were the major sources) often proved unhelpful, and it was necessary to obtain the data by informant elicitation. In addition, all the examples finally utilized as exemplification here have been checked and "approved" by at least one native speaker. It was decided that, where there was no reason to doubt the commonness or correctness of the construction, no reference to the source of the example would be given, since this would add to the bulk of the text without contributing to its content. However, where examples are cited from sources such as other grammars, or where only elicited material is available, this has been noted.

Where elicitation of data was necessary, one principal informant was used. Where the elicited data was in doubt, two other informants (each from a different dialect area) were consulted, and on a few occasions, I had access to a larger body of opinion. In general the level of agreement between informants was high, and gives some assurance that the degree of informant bias is not great enough to invalidate the conclusions reached.

It will be clear that the data used is largely that of the written language. However, I believe that in all crucial respects, the resulting description is also valid for the spoken language, since the two are not nearly as distinct in Maori as they are, for instance, in English, which has a much longer tradition of writing. There are many places where ellipsis of particles occurs in the spoken language, but I believe that the forms of the written language would have to be postulated as underlying the spoken forms if the regularities are to be described. The grounds

for favouring the use of written data over spoken data seemed great enough to justify its choice.

1.2 The Position of Maori in New Zealand Today

An understanding of the use of Maori today is essential to an understanding of some of the methods, problems, and results of this study, and such an understanding necessitates a brief historical survey. The facts are not easily ascertained, however, and no claims are made for the accuracy of the picture presented here: the account relies heavily on Biggs (1968), the only historical sketch I have been able to find, and is supplemented by my own observations and the recollections of others. Despite these reservations, the general outlines are, I believe, uncontroversial.

At the time the first Europeans arrived to settle in New Zealand, Maori society was organized on a tribal basis, and in linguistic terms each tribe constituted a dialect group. There were, however, two major dialect groups in the North Island, usually referred to as Eastern and Western, and another major group in the South Island. It appears that the main ranges produced this division in the North Island. The South Island Maori population dwindled in post-European times even more drastically than the North Island population, and the distinctness of the South Island dialect has apparently disappeared. Standardization of the language began with the introduction of a written form, for which the early missionaries were largely responsible, and with the subsequent increase in literacy amongst the Maoris. There is no evidence to suggest, however, that the dialect differences were ever great

enough to impair seriously communication between tribes, and standardization seems largely to have been a matter of the selection of the lexical forms with the widest distribution across tribes. At this period, the seat of government was in the north of the country, and the Western dialect was almost certainly the basis of the standard. (The basic texts of this study are predominantly from the Eastern area, which appears to have a number of linguistically interesting innovations; most linguistic studies to the present have had a Western dialect bias.)

As in other countries colonized by the British, education of the native population to provide basic literacy was given a great deal of priority. The earliest Mission schools provided education in Maori, and by the mid-nineteenth century the Maori population is said to have been more literate than the settlers (Biggs, 1968, 73). In 1847, English was introduced as a second language in Maori medium schools, but the increase in English competence was not great enough to satisfy the authorities. Accordingly, Maori medium education was outlawed in the 1870s. The use of Maori was also discouraged at school, and in some cases its use brought punishment. The majority of Maori children entering primary school for the next 50-60 years were monolingual Maori speakers, who learned English (with varying degrees of success) as a second language through the school system. The most gifted children became, of course, fully bilingual (and are now the mainstay of the Maori-speaking population).

As the next generation came into the schools, it became clear to the educators that they were under-achieving at school because

of the inadequacy of their English. As Maori and Pakeha populations had become geographically more integrated, so had school classrooms, and as no special language programmes were in use, the native speakers of English succeeded and the non-native speakers failed. The outcome - a two-tier society with Pakehas on top and Maoris at the bottom - was on its way. This caused a number of prominent Maori leaders (themselves successful in Pakeha-dominated society) to call for increased use of English in the Maori home - and, of course, a decrease in Maori. The Maori language was seen as a stumbling block. The educational pressures from within and without the Maori community thus contributed to the decline in the use of Maori. An additional factor was urbanization: many younger Maoris moved to the English-speaking towns and cities, away from the maraes where Maori still had (and has) an important ceremonial function. The result of this was a generation in which the vast majority of Maoris had at best a smattering of Maori. Their mother tongue was English, but Maori English (see e.g. McCallum, 1973; Holmes, 1979), and not the standard English expected by the schools. It is perhaps little short of tragic for many Maoris that they lost their Maori language heritage, and gained something which was still unacceptable in the eyes of the educators.

The situation with respect to the Maori language today is thus one of a dying language. There are a few monolingual Maori speakers still alive, living in extremely isolated rural communities, and probably none under 80 years of age. The next generations are bilingual in English in varying degrees; they frequently disapprove of the kind of Maori spoken by the younger generations, and many

of them function with some difficulty in a society which takes for granted competence in English. They are largely in the 55-80 age-group. The 40-55s are a more mixed population. The majority speak a considerable amount of Maori, but there are some amongst them who have Maori as a second, rather than a first language. There are still a significant proportion, however, who grew up in predominantly Maori-speaking homes. The generation 20-40s is almost entirely composed of those with English as their first language. The percentage of native speakers of Maori in many areas is very small indeed. However, it seems true that increasing numbers want to learn Maori as a second language, though few had the opportunity to do so at school. The youngest generation has even fewer native speakers, but far more of them have the opportunity to learn Maori at school, far more want to do so, and, perhaps most importantly, the Maori-speaking members of the community are providing not only encouragement but some opportunities for this generation to use their acquired skills at least passively, on the marae. The Maori community thus hopes that a last-ditch stand to save Maori from the death which seemed unavoidable even ten years ago may be successful. In this they are receiving some government support. It is, of course, too soon to judge the final outcome.

The New Zealand Council for Educational Research has been carrying out a survey of the use of Maori in New Zealand homes, and the results support the general sketch given here. Firstly, there is considerable variation in knowledge of Maori from area to area. Benton writes (1979a, 3):

... the places where Maori is spoken by most people are few in numbers [sic] and mostly fairly isolated. The places where no one knows Maori are also few although generally with larger

populations. In most North Island communities active command of the language is held by a minority of the Maori population, with the passive knowledge varying widely from place to place.

Secondly, the results of the survey show the enormous variation in knowledge of Maori from one generation to another. In another paper, Benton writes (1979b, 11):

Approximately half the Maori population is under the age of 15 years. In our sample, only 15% of this age group were able to speak Maori. On the other hand, those aged 45 and over, only 12% of the total Maori population, accounted for 38% of all the Maori speakers.

It is thus clear that, from a linguist's point of view, only a small number of Maori speakers remain who have full native-speaker competence. Even with the NZCER survey, it is not possible to give a figure, however, since varying degrees of bilingualism had to be counted together.

Attention must be drawn to a few points of importance for this work. Firstly, the decision not to use spoken data was taken because of the general unavailability of such data. Older Maoris are shy generally in proportion to their knowledge of Maori. The commonest uses of the language are for greetings and for ceremonial occasions on the marae. Much of this data is stylized, and thus not the most suitable for the purposes of a linguistic description such as that undertaken here.

Secondly, the background of my informants must be explicitly stated: my main informant belongs to the 55-80 age-group, learned English as a second language at primary school, is bilingual, and the examiner for the Maori-English translator's certificate (not a very onerous job nowadays). The other three informants who have been consulted regularly belong to the 40-55 age-group, and are amongst those from primarily

Maori-speaking homes. They thus represent a conservative body of opinion on the Maori language.

Thirdly, it will be clear that there was (and probably still is) a time at which the Maori language was weak in terms of numbers of native speakers, and certainly of monolingual native speakers. Because of the close contact with English throughout this period, it is inevitable that modern Maori will show a good deal of English influence. It is easy to spot this in the lexicon - in the large numbers of English borrowings even where there is an existent Maori word (e.g. mārena vs. moe 'marry'; wini vs. matapihi, mataaho 'window'). I believe the influence on many aspects of the phonology is widespread, but has largely gone unremarked: increasing aspiration of stops (Maori piripiri > Eng. biddybid(dy) suggests that at the time of the borrowing, Maori stops were unaspirated), and a tendency to use stress-timing rather than syllable-timing are but two examples. The influence in syntax is much more difficult to assess, but the increasing use of me to co-ordinate personal names and pronouns, and a tendency for speakers to string adjectives are likely examples. There are a number of places in the chapters that follow where possible interference from English is discussed as an explanation for otherwise puzzling inconsistencies in the data. Since the bulk of the data comes from sources dating before the grossest decline in Maori, it seems that this problem will have been avoided to some extent. It is difficult to know what kind of attitude to take to such changes. On the one hand, interference is natural when languages are in close contact, and it is merely something to be described. But when the interference takes place where there are so few native speakers, and so many learners as a second language, the interference can potentially

be so great that - for instance, to take an extreme case - the syntax might retain nothing but Maori functional markers, and the phonology become the only major level at which the two languages were different. At this point, the language would, I think, have ceased to retain its own identity. Nothing so drastic has happened, of course, but in places where the structure of the language appears to have been altered fundamentally (as in using me with persons, otherwise treated differently from things), the description here is of the older, conservative form, and such innovations are treated as "errors" (as they were judged by my informants).

1.3 Previous Accounts of the Structure of Maori

The history of writings on Maori goes back more than a century, but there was a long period during which there was little new work. The last two decades have, however, seen an upsurge of activity in this field. The following survey covers all the work, both original and derivative, that has come to my attention, and provides a brief assessment of the contribution made to the study of Maori by each author. Not all the works merit serious scholarly attention, since they are almost totally derivative in nature, but they have all been given at least brief mention, since the number of works is so small. It is entirely possible that other "school" grammars than those mentioned here have been in use for short periods of time, and are now out of print and forgotten. Judging from those still extant, their omission from this account is not a serious loss.

1.3.1 The Early Works

The oldest grammar of Maori available to me is Maunsell's (1842) Grammar of the New Zealand Language. To judge from his work, Maunsell was a clergyman with a classical education, and an acquaintance with Hebrew through his theological studies. The grammar follows a classical arrangement as far as possible, discussing the syntax under Parts of Speech (largely those recognized in grammars of Indo-European languages). However, Maunsell plainly recognized that these categories were not always particularly suited to the description of Maori, and he cannot be accused of forcing Maori to fit a Latin mould. Nevertheless, many of his statements indicate at least an expectation that the traditional categories used in grammars will prove relevant. For instance, he says of relative pronouns (1842, 29)

Sometimes they are wholly omitted in the sentence ... At other times their place is supplied by some artifice of the construction.

Maunsell's remarks are at times rather patronizing, e.g. (1842, 146):

It has been already observed that Maori inclines to the substantive form. That such is only natural will be obvious to anyone who will reflect that it is more easy for an unpolished mind to conceive of things as existences, than to trace them through the various modifications of act denoted in a verb

but his grammar nevertheless contains a great many valuable observations on the structure of the language at that period, and a wealth of data.

Williams's (1862) grammar is far more widely available than Maunsell's, and has been reprinted (and altered by later "editors") many times. This work formed the basis for all descriptions of Maori between 1862 and Biggs's work, nearly a century later. Williams's grammar is notable for its freedom from Latin syntax, and for its insights into the language. It appears that many of the special categories required for the description

of Maori such as "local nouns" were first recognized by Williams, and the grammar is remarkably free from prescriptive tendencies. It is perhaps interesting to compare Maunsell's remarks on relative pronouns, cited above, with Williams's (1862, 51):

There are no Relative Pronouns in Maori. Their place is supplied either by the position of the words forming the relative clause; or by the personal pronoun of the third person singular; or, again, by the use of certain particles.

This is typical of the difference between the two grammars - Williams is more specific about the structure of Maori, and less concerned with the grammatical expectations of those familiar only with Indo-European languages. It seems likely that Williams knew Maunsell's work, and probably drew upon it. There is remarkably little of value in Maunsell (other than exemplification) that is not incorporated in Williams.

The younger Williams also published two articles in JPS, H. W. Williams, 1928; 1929, which are worthy of mention, since they too are remarkably "modern" in their descriptive approach. Neither is, however, primarily concerned with Maori; they are both about comparative Polynesian syntax.

1.3.2 The Middle Period

From 1862 to 1960, little was published on Maori other than what can be called "school" grammars, although some were evidently intended for an adult audience. They all assumed that Williams's grammar was gospel, and the few new insights they offer are largely additional data (possibly from dialects less familiar to Williams), and some comments on more modern usage, although these are seldom included specifically for this reason. The earliest I have seen, Stowell, 1911, aims at (1911, iv) "beginning with the simplest expressions and passing along by gradual stages to the most complex", but has this on the first page

(1911, 7-8):

Kia is a sign of the jussive tense let-it-be:-

Kia mārama, let it be light.

Ki a has the meaning of unto:-

Hāere mai ki ā au, come hither unto me.

Hāere atu ki ā ia, go thither unto him.

Including as it does the negative prefix un-, ki a is largely infinitive:-

Taihoa ē hoe, ki a tāe mai ērā, defer the paddling until the others arrive.

This sort of confusion continues through the work, and it is perhaps rather unfair to describe it as derivative from Williams, since the author appears to have little understanding of either English or Maori grammar.

Smyth's (1939) grammar (which went through six editions) is probably the best of the school grammars. It relies explicitly on Williams, often quoting the generalizations from Williams, and supplying exemplification. It does not, however, appear to contain anything new.

Harawira's (1950) Teach Yourself Maori also appears to derive largely from Williams, although it contains a good deal less information than Williams. Its chief interest lies in the fact that the dialect is not the one described by Williams. It has, for instance, ko rather than ki for direction (1950, 41), although ki is also used (e.g. 1950, 34) with this function.

Wills's (1960) grammar, aimed at schoolchildren, acknowledges explicitly its debt to Williams (1960, vi), and, rather like Smyth's, is a fairly faithful copy in its grammatical explanations, although its reordering of the material is rather more radical than Smyth's. Again, its major linguistic value lies in the additional exemplification.

Finally, there is Ngata's (1964) grammar, essentially a very brief summary of Williams, but supplemented by a large amount of illustrative

material. The debt to Williams, though not explicitly stated, is clear.

There is one further work which belongs by date to this period: Johansen's (1948) monograph. It is, however, a very different work from the others in this section: an attempt to elucidate in a linguistically interesting manner certain aspects of the structure of Maori. It contains a large number of analyses which are strikingly original, and very modern; they have not received the serious consideration they deserve, presumably because the article is not as readily accessible as other publications.

1.3.3 Modern Scholarship

Biggs was the first to make substantial new contributions to the study of Maori in the post-war era, and his work has been the most influential since Williams. His original Ph.D. thesis, published in Anthropological Linguistics (Biggs, 1961) is a rather unreadable taxonomic approach listing morphemes and their co-occurrence. It contains little that belongs to the domain of syntax proper, though it discusses the internal structure of phrases. However, the use of the "phrase" as the basic unit for the description of the structure of Maori stems from this work, and that alone was a significant step forward. From this came the much more approachable 1969 book, which deals with syntax as well as morphology, although the treatment of units larger than the simple sentence is rather scanty. The 1973 revision of this contains some important alterations, apparently largely due to Hohepa's work, but the approach taken by Biggs is still basically structuralist. Biggs has written several shorter articles, the most important being his 1974 discussion of some of the most awkward categories in Polynesian linguistics.

Hohepa's Ph.D thesis, published as an IJAL supplement in 1967, was an attempt to supplement Biggs's work by providing a systematic account of Maori syntax. It uses a mixture of structuralist taxonomic and Chomskyan approaches. Hohepa proposed a set of transformational-generative rules for the basic structures of Maori, but took the Aspects model for granted, which led to some rather strange descriptions. Two subsequent articles by Hohepa must also be mentioned: an article on negation in Maori (Hohepa, 1969a) and one on deletion in complex sentences (Hohepa, 1970), which are both transformational accounts of areas of Maori syntax. Hohepa's thesis and his stay at MIT had quite important consequences for the study of Maori. Hale's (1968) review of Hohepa, 1967, raised issues concerning the passive which led to an increase of scholarship addressing itself to this problem in the wider Polynesian context, and lectures given at MIT by Hohepa gave rise to a number of (unpublished) papers on Maori (amongst them Mark, 1970), and were at least partially the stimulus for Sandra Chung's work on Polynesian.

Clark's Ph.D. thesis on Proto-Polynesian syntax (Clark, 1976) must be mentioned in this context, as it raises the issue of the relationship between those Polynesian languages with an accusative-type morphology and those with an ergative-type morphology. It is not, of course, primarily concerned with Maori, but this issue led to Clark's 1973 unpublished conference paper which directly addresses the question of the nature of the Maori passive.

Sandra Chung's Ph.D thesis (Chung, 1978) also stems from this line of research, and although Maori is not her central concern, Chung provides a great deal of information on certain aspects of Maori syntax

in the course of this work. There are certain problems with her data, but it is refreshingly sound in its grasp of descriptive linguistic theory.

One further work on Polynesian, rather than just Maori, which nonetheless contains a good deal of insight into Maori data is Chapin's 1974 article on *ai in Proto-Polynesian, one of the areas of Polynesian syntax most difficult to describe. Chapin appears to be the only scholar to date who has dared to tackle this area.

Still more recently, an article by Sinclair (Sinclair, 1976) continues the ergative-accusative debate with respect to Maori. It is perhaps unfortunate that Sinclair's lack of data led him rather astray, and his arguments do not hold, as Chung's reply (Chung, 1977) clearly demonstrates, but it is nonetheless an indication that the controversy which apparently began with Hohepa's thesis in 1967 is still alive, and still producing contributions to the study of Maori syntax.

Finally in the line of original research, Tamati Reedy's 1979 University of Hawaii thesis must be mentioned. I was not able to consult this work, as it is only just completed, but believe it to be an analysis of complex sentences in Maori. This cannot fail to provide a substantial contribution to our knowledge of Maori syntax, since complex sentences have had remarkably little attention in any previous work on Maori.¹

¹Since writing this, I have seen a copy of the dissertation. It contains a chapter on Relativization, which differs considerably from the one here in the range of data considered, and in its theoretical orientation and conclusions; a chapter on Complementation, including quite a lot of information on adverbial complementation, and some valuable insights into non-verbal sentence structure. It does not lead me to alter the conclusions reached in this work.

One further name must be mentioned in this modern period. Krupa, a Russian scholar, has published a number of books and articles on various aspects of Maori, but these appear to be largely derivative from Biggs, with the addition of some statistical information. Krupa's works include Morpheme and Word (1966), The Maori Language (1968) and a bibliography of research into Polynesian languages (Krupa, 1973), but these provide little that is not available from the other sources discussed in this section.

1.3.4 Summary

It will be clear from this survey that the last two decades have seen an upsurge of interest in the structure of Maori, both for itself, and for the wider issue of the accusative vs. ergative debate on the languages of Polynesia. The second interest appears to have provoked far more research than the first, and accordingly the issues studied have been those with a bearing on this controversy. Reedy's thesis is probably the first sign of the increased interest in the Maori language apparent in New Zealand today, an interest which stems from the increased teaching of Maori as a second language. The present work belongs with Reedy's in its motivation, but many of the descriptive problems tackled also have relevance for the historical debate. This is the first attempt to apply Case Grammar to Maori, and the first attempt to use the newly-available insights of Relational Grammar to examine in a fundamental way the significance of grammatical relations to a formulation of Maori syntax.

CHAPTER 2

AN OUTLINE OF THE GRAMMAR

2.0 Introduction

In this chapter, a brief outline will be given of the structure of Maori, and the terminology used in later chapters will be introduced. Many aspects of the grammar which are not central issues in ensuing chapters are discussed briefly, so that the glosses in subsequent chapters will be clear, even when abbreviated. Much of this discussion is uncontroversial, and is merely a presentation of received wisdom. However, there are also a number of issues which impinge in important ways on the subsequent discussion, and some of these are areas of considerable controversy in Maori (and sometimes in Polynesian languages in general). It will be made clear as the discussion proceeds which topics fall into the first category, and which into the second.

2.1 General Structural Principles2.1.1 Sentence Structure

Typologically, Maori, like the majority of Polynesian languages, has a VS(O) structure, e.g.

(2001)	V		S		O
	I	patu / a	Rewi / i	a	Tamahae
	past beat		pers Rewi	prep pers	Tamahae

'Rewi beat Tamahae'.

While other orderings of major constituents occur, they are stylistically marked. This basic ordering is found in both main and subordinate clauses, and also in many question types. Maori appears to be a typical VSO language: the majority of its other structural properties fit with,

for example, Greenberg's characterization of VSO languages (Greenberg, 1963).

2.1.2 Phrase Structure

The phrase is the most appropriate unit for the discussion of Maori syntax. This was first proposed by Biggs (1961), using the term "contour word". The term "phrase" has since become widely accepted. The phrase in Maori is a phonologically defined unit, bounded by potential pauses, which are usually realized in formal speech. Phrases are also structurally definable in Maori, having the general form

Phrase-type Marker + Head (+ Modifier(s)).

The Phrase-type Markers are a group of particles which mark the function of the phrase, and can be divided into two basic types: those marking verbal phrases, and those marking nominal phrases. In verbal phrases, the markers are chiefly tense/aspect, though subordinators also occur in this position. In nominal phrases, the markers are chiefly articles. These points are illustrated by the following:

(2002) Verbal Phrase:	Phrase-type Marker	Head	(Modifier(s))
	Tense/Aspect Particle		
	I	haere	atu
	past	move	away
	'went'		
	Subordinator		
	kia	hoki	mai
		return	hither
	'return'		

Nominal Phrase: Article

te	tamaiti kino rā
the	child bad there
'that bad child'	
a	Rewi
person marker	Rewi
'Rewi'	

Not all scholars are in agreement with Biggs's characterization of these particles as being either nominal or verbal in all instances. Reedy, for example (lectures, VUW, Sept. 1979), claims that some of them have the function of introducing predicate phrases, e.g. he in

(2003)	He whakaako tana mahi
	cls cause-learn his(sg) work
	'His work is teaching'

(but not the he in

(2004)	Ka kitea e ia he pounamu
	unspec see-pass. by he a bottle
	'A bottle was seen by him',

where its nominal-marking function is not in doubt). However, it seems to me that to create a class of "predicate-marking particles", on a par with nominal marking and verbal-marking particles is a misrepresentation of the grammar, since the function "predicate" operates at a different level of grammatical structure from "noun" and "verb", and since there are no particles which occur exclusively in predicate phrases. Structures like (2003) will be discussed in some detail in 2.4.5, but here it will be assumed that a two-way classification of such particles is justified.

Prepositional phrases play an extremely important part in the

grammar of Maori. These phrases have the structure

Preposition + Nominal Phrase.

In fact, only phrases functioning as Subjects in Maori are generally non-prepositional, though there are a few occasions where phrases with other functions are not accompanied by prepositions. The function of the prepositions will be the major topic of Chapter 3, so nothing further will be said here, other than to point out that, in line with case grammar practice, NP is sometimes used for a prepositional phrase, as well as for a nominal phrase without a preposition.

2.1.3 Subject and Object

Both these terms have already been used in this discussion, in the characterization of the language as VSO. This is in fact entirely justified, as will be shown in detail in Chapter 4: the NPs in Maori which have been labelled thus here do indeed have a significant number of properties characteristic of these NPs in languages where such functions undoubtedly exist. Accordingly, foreshadowing the conclusions of Chapter 4, the terms are used here when convenient, although they have been avoided where another locution would serve.

It must be pointed out, however, that these terms have not always been accepted as uncontroversial in the discussion of Maori grammar, and Biggs (1969), for example, avoids (Direct) Object entirely. Even the term Subject has been a matter of dispute, and Biggs's recent comments (Biggs, 1974) are outlined briefly here. Much of the dissent appears to stem from the term 'subject' itself, which is used sometimes as the equivalent of 'grammatical subject', sometimes as the equivalent of 'logical subject', sometimes as the equivalent of 'psychological subject',

and sometimes for some combination of these (see e.g. Sandmann, 1954, for a very detailed examination of these distinctions).

Biggs (1974) points out that Polynesianists, particularly those dealing with the Eastern Polynesian languages, disagree over their use of the term 'subject', and also disagree with Western Polynesianists as to their use of it. Biggs seems to assume in his discussion that the term 'subject case marker' should apply to the reflexes of the same Proto-Polynesian prepositions in all these languages, despite the fact that they appear to be of two divergent structural types: some are accusative, and some ergative (see 2.4.7 for further discussion, and also Sinclair, 1976, and Chung, 1977).

Consider first Maori examples like

(2005) I kainga te poaka e Hone
 past eat-passive the pig by John
 'The pig was eaten by John',

where the verb is in the passive form. Biggs calls the e-phrases in such examples "agentive phrases" (although, as will be shown in 3.2.2, e is no more closely associated with deep Agent case than is English by) and claims (1974, 404)

an agentive phrase is never the subject of a sentence in Maori ... and it is doubtful if phrases in e should be called subject in any Polynesian language.

Plainly, Biggs does not mean by 'subject' 'logical subject'. However, others who have claimed that, in examples like the following from Nanumea (Ranby, 1973, 34), the e phrase is the "transitive subject" (1973, 33), are presumably equating 'subject' with 'logical subject':

Ni taa-gina laaou e aku
 past hit-sfx they by me
 'I hit them'.

(Note that the suffix -gina here is cognate with the Maori passive suffix.) This usage can hardly be called wrong, as Biggs implies, though such writers deserve perhaps to be taken to task for not clarifying their use of the term subject.

In E. Futunan, the language discussed by Biggs, sentences like

Na ta'o le talo e le taꞌgata

past cook the taro ag the man

'The taro is cooked by the man'

are found, and Biggs argues that le talo is the "subject" (1974, 407), and goes on to claim that the subject is always the un-case-marked NP in any Polynesian language. He bases his claims for subjecthood on two criteria: the "indispensability" criterion, and the "what we are talking about" criterion. Now it is fairly clear that the second of these, at least, is related to 'psychological' subject, and the first is probably also related to this. (Problems with "indispensability" are discussed in detail in 4.1.2.) The formal marking, however, appears to identify 'grammatical' subject, and it appears that in Polynesian languages these two types of subject normally coincide, but that (particularly in W. Polynesian languages) they do not always coincide with 'logical' subject. It must be emphasized that Biggs himself does not endeavour to clarify his use of "subject" either, and that his criteria might lead to contradictions if psychological and grammatical subject did not coincide.

Objects have not given rise to the same kind of controversy, but avoidance of the term indicates that writers feel it to be inappropriate, and Biggs, in the article just discussed, indicates that he finds the term unsatisfactory (Biggs, 1974, 407). However, as will

be shown in 4.4, there is a group of NPs which are appropriately called Direct Objects, although it is also suggested that it is not appropriate in all the instances where early scholars such as Williams used it.

A number of related points must be noted here to avoid possible misunderstandings in the interpretation of the data. Firstly, the passive in Maori is not associated exclusively with transitive sentences containing Direct Objects, since we find, alongside such examples, that passives of intransitive verbs occur. Thus beside a straightforward transitive example like

(2006) I kai a Hone i te poaka
past eat pers John prep the pig
'John ate the pig'

with corresponding passive

(2007) I kainga te poaka e Hone
past eat-pass. the pig by John
'The pig was eaten by John'

there are examples like

(2008) I haere atu a Hone
past move away pers John
'John went away'

with corresponding passive

(2009) I haerea te whenua e Hone
past move-pass. the land by John
'The land was travelled over by John'.

Passives of mental activity verbs are also common, e.g.

(2010) ... ngā mea katoa e pTrangitia ana e ia
the(pl) thing all pro- want-pass. -gress by he
'... all the things being wanted by him'

(2011) I mōhiotia noatia ngā tamariki e ia
 past know-pass. already-pass. the(pl) children by he
 'The children were already known to him',

although such verbs should probably not be regarded as having direct objects (see 4.4).

Secondly, it is not the case that all verbs which require two nominal arguments have direct objects. The mental activity verbs, later called 'experience' verbs (see 2.3.7) appear to require two arguments, and thus might be called transitive, but the second argument has very few properties of direct objects (see 4.4), and shares more with oblique NPs and subjects; this is more characteristic of intransitives. The boundaries between transitive and intransitive are therefore somewhat blurred in Maori, and the term transitive is largely avoided in the discussion. Intransitive is retained for convenience, but used only for verbs with one compulsory argument.

Thirdly, Biggs's terminology must be mentioned. He speaks of "comments in i and ki" (1969, 29), regardless of their grammatical function, which obscures the fact that not all i phrases function alike, and not all ki phrases function alike. Similarly, he calls both i phrases and ki phrases "Goal" in an Action-Actor-Goal construction (1969, 32) which is confusing if the case grammar use of Goal is considered, and again obscures differences which are grammatically important. Neither of these two terminologies will be used here. However, the glosses used for i and ki must be mentioned: ki is glossed 'to', since it will be argued (Chapter 3) that it represents a deep Goal case, while i is glossed 'prep' when it marks the direct object, since the arguments that it is, in fact, direct object marker are not given until

4.4, and no English prepositional gloss is available.

2.1.4 Parts of Speech

In general, nouns and verbs in Maori are not formally distinct. Thus with kai 'eat' or 'food', and waiata 'sing' or 'song', only the accompanying particles and sentence position determine whether the use is nominal or verbal. There is a very small class of nouns (eight in all) which inflect for plural, of which the commonest are tamaiti 'child', tamariki 'children'; tangata 'man', tāngata 'men, people'; and wahine 'woman', wāhine 'women'. The majority of verbs take a passive inflection, thus kai 'eat', kainga 'be eaten'; waiata 'sing', waiatatia 'be sung', but certain adverbs and, under some circumstances, nouns, can appear with the passive suffix, and so the occurrence of a passive form does not allow the identification of verbs. Also, there is a class of verbs, called 'statives', which do not occur in the passive. This means that the form classes verb and noun are largely non-distinct in Maori.

Biggs (1969, 50ff) suggests that five parts of speech can be distinguished in Maori, after a division into bases and particles has been made. He says

Bases divide into five classes (parts of speech). The class of a base is determined by the constructions into which it can enter. THERE ARE NO OVERLAPPING CLASSES ... The classification of a base as a noun, a stative, a universal, a locative, or a personal, tells us all that needs to be known about the grammatical constructions into which it can enter. [His emphasis]

His Noun class is a class whose members cannot occur as head of a verbal phrase (i.e. they do not co-occur with verbal particles), but whose members co-occur with determiners. His examples are ika 'fish', ngaru 'wave', rākau 'tree'. Statives are distinguished by the fact that

they do not occur with the passive suffix, but co-occur with verbal particles (and, usually, in nominal phrases as well). His Universals are defined as those bases which occur in the passive; they can normally be used both verbally and nominally. Locatives never occur with determiners, but do not occur in verbal phrases, either. They are a fairly small class of forms, and can be listed exhaustively. Personals include personal names and certain other words which are "personified". Their distinguishing characteristic is their occurrence with the person marker a in some syntactically definable positions.

Biggs is able to claim that no classes overlap because he has created the class 'Universal' to contain essentially those items which would otherwise belong to overlapping classes. This does not really seem to present the problem in its true light, since in many of their uses, Universals function indistinguishably from his class of Nouns, and many Universals function almost exclusively in verbal phrases, occurring with nominal particles only in contexts which border on the verbal (e.g. after ki-te, which is similar to the English to + infinitive). It thus seems that formally defined classes like these are of little use in the description of Maori, although Locatives do constitute a discrete and important class.

It seems preferable to claim that the classes noun and verb overlap to a very large extent, and that when such forms are used verbally, they co-occur with verbal particles, and can be passivized, and when they are used nominally, they co-occur with determiners. Apart from certain constructions which have some nominal and some verbal characteristics, it is always possible to state whether a form in Maori is functioning verbally or nominally.

2.2 The Grammar of the Noun Phrase

2.2.1 Personal Pronouns

In the Maori pronominal system, three persons are distinguished; singular, dual and plural are distinguished; in the first person dual and plural, a distinction between inclusive and exclusive is made (the inclusive forms refer to speaker and hearer (and others), while the exclusive forms refer to speaker and one or more others); gender is not distinguished. The following table sets out the forms and indicates the glosses used.

	sg	2	pl	
1st person	au (ahau)	tāua	tātou	incl
		māua	mātou	excl
2nd person	koe	kōrua	koutou	
3rd person	ia	rāua	rātou	

In the text, ia is translated 'he' or 'she' according to what was appropriate in the original context.

There are also special forms of the singular pronouns which occur cliticized to the prepositions nā, mā, mō and nō. These are

1st sg:	-ku
2nd sg:	-u
3rd sg:	-na,

giving forms like nāku, māu and nōna. These prepositions take the usual forms of the dual and plural pronouns.

2.2.2 Order of Constituents in NPs

As stated in 2.1.2, the basic structure of noun phrases is (preposition) + (determiner) + head + (modifier(s)).

Every noun phrase has a head, although demonstratives may have this function. Determiner is given as an optional category, since locatives (e.g. runga 'the top') do not occur with a determiner, and personals do not always have one. Adjectives follow head nouns, but it is not possible to have strings of adjectives in Maori. The other type of modifier which occurs in post-head position is a deictic particle.

The following examples illustrate these points:

(2012) Det + Pers:

a Rewi

pers Rewi

'Rewi'

(2013) Det + N:

te tamaiti

the child

'the child'

(2014) Prep + Loc:

ki waho

to the outside

'outside'

(2015) Prep + Det + N:

ki te kāinga

to the home

'home'

(2016) Dem + N:

tēnei tamaiti

this child

'this child'

(2017) Det + N + Deictic:

te tamaiti nei

the child here

'this child'

(the difference between (2016) and (2017) seems to be stylistic)

(2018) Det + Adj + N:

te tamaiti paku

the child little

'the little child'

(2019) Det + N + Adj + Deictic:

te tamaiti paku rā

the child little there

'that little child'.

Numerals are modifiers:

(2020) te pereti kotahi

the plate one

'one plate'

(2021) te pereti tuatahi

the plate ord.-one

'the first plate'.

Intensifiers precede the adjectives they modify:

(2022) he tamaiti tino whakatoī

a child very cheeky

'a very cheeky child'.

Nouns are also used as noun modifiers:

(2023) te whare mTraka

the house milk

'the milking shed'.

Complex phrases also occur as modifiers, and in post-head position:

- (2024) he toa hoko kākahu
 a store sell clothes
 'a clothes shop'
- (2025) te tāima hoki ki te kāinga
 the time return to the home
 'home time'.

If two adjectives are required with a head noun, the head is repeated, with or without the determiner:

- (2026) tētahi tangata tino nui, tangata tino mōmona
 a certain man very big man very fat
 'a big, fat man'.
- (2027) he whare kowhatu, he whare pai
 a house stone a house good
 'a good stone house'.

However, constructions involving nesting can give rise to surface strings:

- (2028) ngā tāngata toa tope rākau
 the(pl) men champion cut tree
 'the champion wood-cutters'.

Note that

- (2029) kura māhita
 school master
 'teacher',

transliterated as a phrase, and sometimes written as one word, breaks the normal ordering rules.

2.2.3 Determiners

The basic position for determiners is preceding the head noun. The semantic relationships expressed by the determiners in Maori remain somewhat unclear, and the following account is therefore tentative. Firstly, it must be noted that absence of a determiner is very marked in Maori, and regularly occurs in only one construction, in which the object of a verb is incorporated into the verb, losing both its preposition and its determiner, e.g.

(2030) Kei te ruku kōura rāua
 at(pres) the dive crayfish they(2)
 'They are crayfish-diving'

cf.

(2031) Kei te ruku rāua i te kōura
 at(pres) the dive they(2) prep the crayfish
 'They are diving for crayfish'.

This construction is frequently, but not compulsorily, used where English would have an indefinite object NP with no article.

2.2.3.1 Te

This is usually called the definite singular article (e.g. Williams, 1862, 19; Biggs, 1969, 48). However, its association with definiteness is in some uses rather tenuous, as the previous example shows.

Clark suggests (1976, 47) that in Polynesian the definite article

is used whenever the speaker has a particular individual in mind, whether or not the addressee is expected to be able to identify the individual

and points out (1976, 48) that "specific" might thus be more appropriate than definite. However, usages like the one in (2031) do not seem

to be accounted for even by this refinement. In many respects, it seems to function as the unmarked determiner, and is used when a determiner is required, but the specific semantic features of the other determiners are not appropriate. Johansen (1948, 10) also reaches this conclusion from a consideration of similar types of example. Thus te is probably rightfully the neutral determiner, but further research would be necessary to confirm this. It is glossed 'the' throughout this work, with no indication of other features which may be attached to it, and with no regard for the instances where no gloss would seem to be most appropriate.

One use of te requires further comment: it is used generically, when it occurs with the plural form of the head noun rather than the singular if the two are different. Consider the following examples (the relevant forms are underlined):

(2032) Kotahi hereni te utu mō te tamariki
 one shilling the price for the children
 'The price for children is one shilling'

(2033) He pai te hōiho hēi hari i te tāngata ki te pikitia
 a good the horse for carry prep the men to the picture
 'Horses are good for taking people to the pictures'.

2.2.3.2 Ngā

This is usually called the definite plural article, and the description seems appropriate. It is mainly noteworthy for being irregularly formed; the regular form would be *e, which is non-occurrent. Ngā is glossed 'the(pl)' throughout, and since it appears to cause no problems, one example will suffice:

- (2034) ngā mea katoa
 the(pl) thing all
 'everything'.

2.2.3.3 He

This is probably the most difficult member of the class of determiners, and its semantics are worthy of a good deal more attention. It is usually called the indefinite article, and translated 'a, some'. (See e.g. Biggs, 1969, 20.) Sometimes, at any rate, it appears that the appropriate semantic features are [-definite][+specific], e.g.

- (2035) I reira, ka kitea e ia he pounamu i
 at(past) there unspec see-pass. by he a greenstone at(neut)
 Arahura
 Arahura
 'There, he saw greenstone at Arahura',

where it contrasts with tētahi (see below), but on other occasions, he seems to be [+specific], e.g.

- (2036) he kupu hou
 some word new
 'new words',

which is used as the heading for vocabulary lists in Te Rangatahi.

In addition, he is excluded from a variety of syntactic positions where indefiniteness would seem a possible concept; in particular, it does not occur in the subjects of active transitive sentences, nor following prepositions. In these instances, it is replaced by tētahi. No reasons for this distribution are apparent. It may, however, provide the clue to the semantics of he: if there is a potential contrast with

tētahi, then he is [-specific], but otherwise it is unmarked for this feature. There appears to be only one environment from which tētahi is excluded, and that is verbless sentences of the type:

(2037) He kura māhita ia
 c/s school master he
 'He is a teacher'

(2038) He whare pai tēra
 c/s house good that
 'That's a good house'.

Such examples seem best regarded as classifying: 'he' is a member of the class 'school teachers'; 'that' is a member of the class 'good houses'. This function appears to be rather different from the others, and it is not clear whether 'indefinite' is appropriate to it, but it is worth noting that the English indefinite article also has the classifying function, and it seems rather unlikely that such a syncretism in two entirely unrelated languages is pure coincidence. The problems with he will be taken up again in 2.4.5 and 4.1.8. Unless predicative, as in (2037) and (2038), it is glossed throughout as 'a, some', although this gloss does not always seem semantically helpful.

2.2.3.4 Taua (aua)

These are the singular and plural forms of another definite article. Note that the plural formation here is regular: the initial t- of the singular is deleted to form the plural. These forms are strongly anaphoric, and usually translated 'the' or 'that/those'. Since te and ngā can also be definite through previous mention, there is no absolute distinction between the two sets of definite articles; taua (aua)

is the preferred form when emphasis is placed on the anaphoric relation.

2.2.3.5 The Personal Marker

The 'proper article', a, (as Biggs (1969, 21) calls it) is used principally with personal names. It is glossed here as 'pers', for 'personal', e.g.

(2039) Kei te oma a Tamahae
 at(pres) the run pers Tamahae
 'Tamahae is running'.

However, after the prepositions a, o and their derivatives, ko, e and me, it is not used, e.g.

(2040) Ko Hata te pāpā o Tamahae
 eq Hata the father of Tamahae
 'Hata is Tamahae's father'.

This appears to be phonologically determined within the noun phrase: it occurs after the prepositions i, ki, kei, hei. Unfortunately, Maori has no prepositions ending with -u, so it is not clear whether the environment from which it is excluded is [-high], or whether the environment is [-high][-front].

The personal marker is also used with pronouns (including wai 'who') when they follow prepositions ending with /i/, and in formal writing, also when pronouns function as subjects. Ahau, but not au 'I', is exceptional in not using the personal article, possibly because the initial a- is historically the personal article. I know of no evidence for this, but it seems plausible.

It is also used with nouns of location functioning as subjects, e.g.

- (2041) He tāone pai a Pōneke
 cls town good pers Wellington
 'Wellington is a nice town'
- (2042) He mārama makariri a Hūrae
 cls month cold pers July
 'July is a cold month'
- (2043) Ka wera a waho
 unspec burnt pers the outside
 'The outside is burnt'.

None of these forms can be used substantivally, but the remainder discussed in 2.2.3 can.

2.2.3.6 Tētahi (ētahi)

These forms are indefinite singular and plural. They are usually translated 'a/some' or '(a) certain', and, as the latter suggests, they are at least sometimes [+specific], as in

- (2044) I reira, ka kitea e ia tētahi pounamu
 at(past) there unspec see-pass. by he a certain greenstone
 i Arahura
 at(neut) Arahura

'There, he saw a particular piece of greenstone at Arahura'.

However, the problems concerning this description have already been raised in the discussion of he, and there is no need to do more than illustrate the use of these forms when non-specific:

- (2045) Pūhia, kei mate tētahi tangata!
 shoot-pass. might dead a certain man
 'Shoot [it]; [it] might kill somebody!'

2.2.3.7 Demonstratives

There are three deictic forms in Maori, nei, nā and rā, which have the features near speaker (nei), near hearer (nā), and distant (rā). These combine with the definite article te to form three singular demonstratives, tēnei, tēnā, tērā, which occur preposed in nominal phrases, e.g.

- (2046) tēnei whare
 this house
 'this house'.

They form their plurals regularly, i.e. by dropping the initial t-, giving ēnei, ēnā, ērā. In this work the glosses used are tēnei 'this'; ēnei 'these'; tēnā, tērā 'that'; ēnā, ērā 'those', i.e. the distinctions within 'distant from speaker' are not indicated in the glosses.

The effect of a demonstrative can also be obtained by postposing the deictic particle after the head. Thus, as an alternative to (2046), there is

- (2047) te whare nei
 the house here
 'this house'.

The corresponding plural form, however, uses ngā:

- (2048) ngā whare nei
 the(pl) house here
 'these houses'.

The differences seem to be stylistic; the choice is often based on rhythmic considerations.

2.2.3.8 Possessives

This is an area of considerable complexity in Maori, and the distinctions will be discussed in the separate section on possession below (2.2.4). Here, those forms which function as determiners will be listed in full for convenience. There are three sets:

(a) Neutral Possessives

	sg	pl
1st person	taku	aku
2nd person	tō	ō
3rd person	tana	ana

These cannot be used substantively.

(b) A-class Possessives

	sg	2	pl
1st person	tāku	tā tāua	tā tātou
		tā māua	tā mātou
2nd person	tāu	tā kōrua	tā koutou
3rd person	tāna	tā rāua	tā rātou

These are the forms for singular possessed entities, and these forms are used without the initial t- for plural possessed entities.

(c) O-class Possessives

These differ from A-class Possessives in having ō for ā:

	sg	2	pl
1st person	tōku	tō tāua	tō tātou
		tō māua	tō mātou
2nd person	tōu	tō kōrua	tō koutou
3rd person	tōna	tō rāua	tō rātou.

Plural forms of these are formed by dropping the initial t-.

Although the distinctions between these have not yet been discussed, the following examples illustrate the construction:

(2049) tō ika
your(sg) fish
'your fish'

(2050) Ko tāku kurī tēnei
eq my(sg) dog this
'This is my dog'

(2051) Ko tō mātou whare tēnei
eq our(sg) house this
'This is our house'.

(Note that the indications sg and pl in glosses for possessives refer to the possessive forms and not to the pronouns which form part of them.) The substantival use is illustrated by

(2052) He kurī ā rāua
cls dog their(pl)
'They have some dogs'.

For further information on the use of these forms, see Biggs, 1955.

2.2.4 Possession

There are two categories of possession in Maori, usually called 'dominant' and 'subordinate', depending on whether the possessor is regarded as dominating the possessed object, or as being subordinate to it. Dominant possession is marked by a, subordinate possession by o. Amongst the things dominantly possessed are food, animals (except the horse), portable objects, work and activity, and people under your authority. Amongst the things subordinately possessed are

modes of transport (including the horse), land and dwellings, clothing, water and medicine, qualities (intangibles), parts of things, and people with authority over you. The two prepositions a and o are used alone to introduce phrases qualifying the head noun; they are glossed 'of' under these circumstances, e.g.

(2053) Ko ia te tama a Hoani rāua ko Ruhi
 eq he the son of John they(2) top. Ruhi
 'He is the son of John and Ruhi'

(2054) te tangi a ngā manu
 the sound of the(pl) bird
 'the birds' twittering'

(2055) Kei a Rangī tonu tētahi o ngā pūtōrino
 at(pres) pers Rangī still a certain of the(pl) flute
 'Rangī still has one of the flutes'

(2056) te waka o Hoturoa
 the canoe of Hoturoa
 'Hoturoa's canoe'.

These forms are also used in nominalizations to make a distinction similar to that between the subjective and objective genitive in English. Thus we have

(2057) te patunga a Kupe i te wheke
 the kill-nom of Kupe prep the octopus
 'Kupe's killing of the octopus',

where the subject of the verb dominantly possesses the action, but

(2058) te patunga o te wheke e Kupe
 the kill-nom of the octopus by Kupe
 'The killing of the octopus by Kupe',

where the underlying direct object subordinately possesses the action.

These forms cliticize with the prepositions nā, mā, nō and mō, and with tā and tō, giving nā, mā, nō, mō, tā and tō. The n- forms indicate achieved possession, the m- forms unrealized possession, as illustrated in:

(2059) He kurī tēnei nā Hone
 c/s dog this belong John
 'This is John's dog'

(2060) he rangatira nō Ngāti Awa
 a chief belong Ngāti Awa
 'a Ngāti Awa chief'

(2061) Mā Hone tēnei kau
 for John this cow
 'This cow is for John'

(2062) Mō wai tēnei whare?
 for who this house
 'Who is this house for?'

These forms can also be used with pronouns (the singular pronouns are cliticized to the prepositions), e.g.

(2063) Nāku ngā kura rā!
 belong-I the(pl) feather there
 'Those feathers belong to me!'

(2064) Nō mātou tētahi o ngā poti toa
 belong we(excl,pl) a certain of the(pl) boat champion
 ki te whaiwhai tohorā
 to the chase whale
 'Ours was one of the champion whaling boats'.

The pronominal forms with tā and tō were listed and illustrated above

(see 2.2.3.8). The distinction between the a and o sets is that of dominant versus subordinate possession. These forms are not used solely with pronouns, especially when they are substantival, e.g.

(2065) Ko tā Ruanui te karakia kaha rawa
eq poss Ruanui the incantation strong very
'Ruanui's incantation was the strongest'

(2066) He nui atu te utu o te tangata taraiwa taraka
cls big away the price of the man drive truck
i tō te kura-māhita
than poss the school-teacher

'A truck driver's pay is greater than a school-teacher's'.

The gloss 'poss' is used in such instances, since 'that of' is cumbersome.

In addition to all these forms marking the dominant/subordinate distinction, there are the 'neutral' forms listed above, which neutralize this distinction. Thus we find

(2067) aku mātua
my(pl) parents
'my parents'

(2068) taku tamaiti
my(sg) child
'my child'

even though mātua normally requires subordinate possession and tamaiti dominant possession. Apart from the fact that these forms cannot be substantival, no information is available concerning the use of these as opposed to the ā/ō forms. These neutral forms appear to be much less common in texts, but a good deal of research is apparently needed

before the conditions governing their use can be clarified.

It must also be noted here that temporary possession, as opposed to ownership is expressed by the use of the overtly locative prepositions kei, hei, i, and does not involve the forms discussed above, e.g. (2055) and

- (2069) Kei a Tamahae te toki
 at(pres) pers Tamahae the axe
 'Tamahae has the axe'.

The possessive forms in this section can, of course, be combined if required, e.g.

- (2070) Kei a Pita taku neketai
 at(pres) pers Pita my(sg) tie
 'Pita has my tie'
- (2071) te māuiui o te haere a Petera
 the weariness of the move of Peter
 'the weariness of Peter's walking'
- (2072) te hōiho o ō tāua tamariki
 the horse of our(pl) children
 'our children's horse'.

2.2.5 Nominalization

It is possible to nominalize Maori verbs using the suffixes -nga, -anga, -hanga, -kanga, -manga, -ranga, -tanga, -inga (Williams, 1862, 44). Not all of these are productive today, as far as it is possible to judge, but -nga, -hanga, -ranga and -tanga appear to be. The choice of suffix is in many cases determined by the same principles as determine the choice of passive suffix, and this will be discussed in detail

when the passive is discussed (see 2.3.8). A few examples are given here to illustrate the formation and the range of associated meanings:

(2073) ruakitanga 'vomiting'	from ruaki 'vomit'
ekenga 'arrival'	" eke 'come to land'
whakamaharatanga 'memorial'	" whakamahara 'remember'
tirohanga 'looking'	" (ti)tiro 'look'
moenga 'bed, sleeping place'	" moe 'sleep'
whakatupuranga 'generation'	" whakatupu 'rear'

The possessive forms used with such nominalizations were discussed in the previous section.

2.3 The Grammar of the Verb Phrase

2.3.1 Order of Constituents

As stated in 2.1.2, the basic structure of the verb phrase is Tense/aspect particle + head + (modifier(s)).

Every verb phrase has a head, which is a lexical verb, but there are more variations on the basic structure of the verb phrase than are found for the noun phrase.

There is one discontinuous aspect marker, e ... ana, which is positioned round the head, e.g.

(2074) e kai ana
 pro- eat -gress
 'is/was eating'.

There are also a small number of tense/aspect particles which follow rather than precede the head. None of these is common in the data for this work, but the pattern must be noted, e.g.

(2075) waiata ai
sing habit
'sing'

(2076) haere ana
move narrative
'went'.

Adverbs typically follow the head, e.g.

(2077) Kei te moe tonu a Tamahae
at(pres) the sleep still pers Tamahae
'Tamahae is still sleeping'

(2078) Kāore te taraiwa i kite wawe i te kau
not the driver past see soon prep the cow
'The driver didn't see the cow soon enough'.

This includes the directional adverbs mai, atu, ake, iho etc., e.g.

(2079) Kua tae mai ngā kau
perf arrive hither the(pl) cow
'The cows have arrived'

(2080) Titiro atu ki te kau e tū mai rā
look away to the cow non-pt stand hither there
'Look at the cow standing over there'.

However, there are a few adverbs which regularly precede the verb head, of which the commonest are tino 'very', āta 'carefully', mātua 'first', āhua 'somewhat', e.g.

(2081) Ka āhua pukuriri a Tamahae ki a Rewi
unspec somewhat angry pers Tamahae to pers Rewi
'Tamahae was somewhat angry with Rewi'

(2082) Kia āta mahi!
let be carefully work
'Work carefully!'

If e ... ana or the tense/aspect markers which follow the verb are used with adverbial modifiers, the modifiers precede the final (part of the) marker, e.g.

(2083) Tae mai ana aua waka ki te kēti o te marae
 arrive hither narr. those canoe to the gate of the marae
 'As soon as the vehicles arrived at the gate of the marae ...'

(2084) E haere takitahi ana rātou
 pro- move singly -gress they(pl)
 'They were going singly'.

2.3.2 Directional Adverbs

A few words are required concerning the particles mai, atu, ake, iho. These form correlative pairs

mai - atu
 ake - iho.

The function of these forms is not well understood, but they are of very common occurrence, and their absence can lead to the rejection of a sentence as ungrammatical, so they cannot be ignored. They appear to be a deictic phenomenon, basically speaker-related. Sometimes they have a straightforward directional function, e.g. with haere, which does not in itself indicate direction of movement, mai and atu are commonly required:

(2085) haere mai
 move hither
 'come'

(2086) haere atu
 move away
 'go'.

Similarly, hoko 'barter' frequently requires these:

(2087) hoko mai
barter hither
'buy'

(2088) hoko atu
barter away
'sell'.

One verb, 'give', always has these incorporated, i.e.

(2089) homai
'give to speaker'

(2090) hoatu
'give away'.

Ake and iho serve a similar function with verbs like piki 'ascend' heke 'descend', which frequently use these particles with an apparently intensifying function.

However, on a very large number of occasions, no movement of any physical kind is involved, and the use of mai and atu appears to indicate a type of mental attitude on the part of the speaker. Consider:

(2091) Te kōtiro ātaahua e noho mai rā!
the girl beautiful non-pt sit hither there
'What a beautiful girl sitting over there!'

Native speakers find it extremely difficult to talk about the reasons for the inclusion of mai in structures of this kind, but it appears that mai is used because the speaker has a positive attitude towards the girl. Notice that mai here combines with rā, which indicates the physical distance of the girl from both speaker and hearer. Some speakers claim that mai in such instances indicates that the object is facing

the speaker, and atu that the object is turned away from the speaker. However, the following examples will indicate that none of these explanations is entirely satisfactory:

- (2092) E iri mai ana ngā tuna a Hata
 pro- hang hither -gress the(pl) eel of Hata
 'Hata's eels were hanging there' (with the implication

in the context that they were a taunt to the speaker)

- (2093) E kai mai ana te pūru me ētahi kau i
 pro- eat hither -gress the bull with some(pl) cow prep
 ngā karaehe o te pātiki hei
 the(pl) grass of the paddock hay
 'The bull and some cows were eating the grass of the
 hay paddock'

- (2094) Kia maumahara ki a tātou tamariki e moe mai
 let be remember to our(pl) children non-pt sleep hither
 rā i ngā pae o te pakanga i
 there at(neut) the(pl) field of the battle at(neut)
 Awherika, i Itari, i Parani
 Africa at(neut) Italy at(neut) France
 'Remember our sons sleeping there on the battlefields
 of Africa, Italy and France'

- (2095) Ko wai te wahine e pTrangi atu ki te taurekareka
 eq who the woman non-pt want away to the scoundrel
 nei?
 here
 'What woman would want this scoundrel?'

No attempt has been made here to tackle this problem, as it is plain

that only a major piece of research would shed any light on the problem.

2.3.3 Deictic Adverbs

The three deictic particles nei, nā and rā, which were discussed in relation to the noun phrase in 2.2.3.7, also function as adverbs expressing location relative to the speaker and hearer. The distinctions are the same as those discussed in 2.2.3.7. One example is given here for completeness:

- (2096) I noho nei ngā tamariki
 past stay here the(pl) children
 'The children stayed here'.

These particles also combine with other morphs to give deictically marked forms. Reira, which functions rather like the determiners (t)aua, in that it is strictly anaphoric, marks location; the set ānei, āna, āra probably contain the personal article a (compare its use with local nouns, see 2.2.3.5) and the deictics, but these forms seem to be used predicatively in verbless sentences, e.g.

- (2097) Ānei tētahi rua, engari kāore he manu o roto
 here a certain hole but not a bird of the inside
 'Here is a hole, but there's no bird inside'.

The set konei, konā, korā are used in prepositional phrases to express location, e.g.

- (2098) Ka haere mai ia ki konei
 unspec move hither he to here
 'He came here'.

All these forms express concrete location, but there is one set utilizing the deictic particles which appears to express rather abstract location:



pēnei, pēnā, pērā 'like this/that'. Thus we find

(2099)	Pēnei tonu	i	a	Tamahae nei)	
)	
	like	indeed	compar	pers	Tamahae	here
)	
	Pēnā tonu	i	a	Tamahae nā)	te māngere
)	
	like	indeed	compar	pers	Tamahae	there
)	the laziness
	Pērā tonu	i	a	Tamahae rā)	
)	
	like	indeed	compar	pers	Tamahae	there
)	
	o taua tamaiti					
	of that child					
	'That child is lazy just like Tamahae'.					

The distinction between the three forms appears to be in the mental attitude of the speaker (cf. the remarks on mai/atu), rather than in the physical location of, in this instance, Tamahae.

2.3.4 Tense/Aspect Particles

Much of the discussion of these particles in the previous literature has been hampered by such factors as failure to distinguish tense and aspect, lack of an adequate theoretical framework, and interference from Indo-European systems. While some of these problems remain, I believe that progress can be made in dealing with the description of tense-particles in Maori, using the framework for the description of tense proposed by Comrie (seminar, Victoria University of Wellington, October, 1979). This framework will be outlined, and then each of the particles will be discussed in turn.

2.3.4.1 Proposals for Tense

Comrie proposes that a distinction should be made between 'Absolute'

tense, and 'Relative' tense. If a tense marker shows absolute tense, then the reference point, according to Comrie, is the present. Thus an absolute past tense is past with reference to the present. On the other hand, relative tense markers have some other point of reference, such as adverbs, which determine how they are to be understood on any particular occasion. Nevertheless, if the reference point is unspecified for a relative tense marker, the reference point is taken as present.

Comrie postulates a basic three-way distinction for time, i.e. past/present/future, and points out that languages might conceivably show any of the following binary systems based on this, rather than the ternary system:

- (i) past/non-past
- (ii) future/non-future
- (iii) present/non-present.

However, he claims that (iii) is not found, and that (ii) is highly unlikely.

These are not necessarily the only distinctions made; for example, some languages mark in addition the degree of remoteness from the present. However, Comrie proposes that distinctions of this kind are secondary.

Some languages have only absolute tense, some have only relative tense, and others have a mixture. I believe Maori to be of this last kind.

2.3.4.2 Previous Analyses of Maori Tense/Aspect

Only those writers who have contributed significantly to this topic will be discussed in detail. They have in general treated each particle separately, and their remarks are summarized accordingly.

Maunsell (1842, 132ff) has quite a number of interesting observations on these particles, but here, as elsewhere, his style and terminology are at times difficult to interpret. He describes e (1842, 132-3) as sometimes present, sometimes future, but "chiefly employed to denote contingency, or some future act on which something else depends". He notes (p.134) that ka is used extensively, sometimes for present, and often for future, and "is often employed in hypothetical or contingent propositions". Of e ... ana, he says (p.134) it is "strictly the sign of the present tense ... Sometimes, when it follows a past time, its meaning will also be past". i is described as "a particle of the past time" (p.135), but Maunsell mentions that it is sometimes used to denote the present, and sometimes used for contingency. Of kua, he says (p.135) it is "the sign of the past tense, e.g. Kua korero atu ahau ki a ia, I have spoken to him", adding that it is distinguished from i in that it is "unlimited ... in construction". In addition, he remarks (p.137) that it "is sometimes employed where a present would be used in English", as well as noting some other more specialized environments for kua. Maunsell does not treat the kei te and i te progressives as verb particles.

Williams (1862, 33) sets up the following scheme:

Indefinite: Present ka, Past i, Future e

Continuous: Present, Past, Future e ... ana

Perfect: Present, Past, Future kua.

Of the indefinites, he remarks (p.33)

The indefinite form of each tense denotes the Present, Past, or Future in its simplest form, the actual time of the action being determined by the context or by a word in the sentence indicative of time,

and adds of ka (p.35) that it

may be used also in conjunction with some word indicative of time, to form a future or prospective present as it may be called.

One further comment on these forms is worthy of note. Williams remarks (p.33)

It must be understood that the tenses of a Maori verb indicate the condition of the action, but do not, except in the case of the Past Indefinite and the Future, connote a time relationship.

Williams mentions (p.37) that kei te forms a "present imperfect tense", and i te a "past imperfect", but does not provide further information regarding their use. It must be noted that the edition of Williams's grammar available to me was revised by W. W. Bird, and one of the significant changes he made was to call ka "indefinite", rather than "Inceptive" (see e.g. Wills, 1960, 70).

The grammars following Williams's but preceding Biggs's made significant comments only on ka. Harawira (1950, 65) notes "In narrative, the particle 'ka' is frequently used regardless of tense, to denote change of action". Wills (1960, 67) says of ka, "Change, not time, is the idea here; a change to a new action or condition, or the beginning of a new action". Ngata (1964, 22) notes "that the particle ka, used to form the Present Indefinite, is also used in vivid narration of past events - the Historical or Narrative Present".

Biggs's (1969) comments on these forms are outlined in some detail, since his description is taken as gospel by the majority of more recent writers (e.g. Hohepa, Clark, Reedy), who do not discuss them. The most significant of his general remarks are (1969, 34)

... the particle ka which simply indicates that the phrase is verbal without saying anything about the time of the action or state. Most of the other verbal particles are also timeless, in fact only one, the 'past' particle i unambiguously indicates time. All other verbal particles refer to the nature or aspect of the action or state denoted by the verbal phrase.

Of ka, he adds (1969, 34) that it is often used to refer to the future, and that it is used "when a new action is beginning". He therefore calls it inceptive. Of kua, he says that it indicates completed action, usually in the fairly recent past. He calls e 'non-past', and says it is used for an action or state that is present or future, but notes (1969, 63) that in modern Maori it is seldom used in the affirmative. He regards the e of e ... ana as the non-past e, and the ana as the (narrative) 'imperfect', and says that the combination, which he glosses 'imperfect', "indicates that the action or state is incomplete or continuous". He later discusses kei te and i te, which he calls the "Pseudo-Verbal Continuous". He notes (1969, 86) that the chief difference between these and e ... ana lies in the fact that kei te "refers to the present or future", while i te "refers definitely to the past only", whereas e ... ana does not specify the time reference.

Sandra Chung (1978, 20-21) appears to have taken a fresh look at the data, claiming that Maori, like other Polynesian languages "distinguishes past versus non-past tense, progressive and perfect aspects", and notes (1978, 21) that in Maori "the embedded clause particles do not distinguish perfect aspect (matrix clause kua) and indicate non-past tense (embedded clause e) rather than unspecified tense-aspect (matrix clause ka)".

It will be seen from this summary that while there seems to be complete agreement on i, kei te and i te, and reasonable agreement on e (which appears to have changed somewhat in its use since Maunsell and Williams were writing) and e ... ana (where Maunsell is somewhat out of line), there is very considerable disagreement about ka and kua.

2.3.4.3

Markers of Absolute Tense

Essentially it is these markers which have not occasioned disagreement amongst previous scholars, and these need not detain us long.

I

This is an absolute past tense, and does not appear to indicate any aspectual distinction, e.g.

(2100) I haere ia ki te tāone

past move he to the town

'He went to town'

(2101) I tūtaki rāua ko Moana i konei

past meet they(2) top. Moana at(neut) here

'She and Moana met here'.

Kei te

This form combines tense and aspect: it represents an on-going action, i.e. is progressive, and absolute non-past tense. Biggs notes that it may refer to the future (see above). I have little data confirming this, but it will be seen from the fact that kei te can co-occur with future time adverbials, e.g.

(2102) Kei te haere koe ki hea a te Aranga?

at(pres) the move you(sg) to where at(fut) the Easter

'Where are you going at Easter?'

that it can refer to the future in at least limited circumstances.

It could, of course, be argued that it is present here, referring to present arrangements for the future, and it may thus be more accurate to describe it as absolute present, but relative future: it is apparently only interpretable as future in the presence of an overt future-time adverbial. In the absence of any adverbial, it is present:

- (2103) Kei te waiata a Hata
 at(pres) the sing pers Hata
 'Hata is singing'
- (2104) Kei te patua te kau e Tamahae
 at(pres) the beat-pass. the cow by Tamahae
 'The cow is being beaten by Tamahae'.

I te

Like kei te, this marker combines tense and aspect: absolute past tense and progressive aspect, e.g.

- (2105) I te haere rātou ki te tāone
 at(past) the move they(pl) to the town
 'They were going to town'
- (2106) I te raka tonu te hōro
 at(pres) the lock still the hall
 'The hall was still locked'.

Even in the areas where the use of these "Pseudo-Verbal" forms is widespread, i te appears to be relatively uncommon. It would seem that e ... ana retains a foothold in referring to past events, but it may also be the case that i is also used in some of the potential environments for i te.

E

This form is included under absolute tense, although there is some doubt about its semantics in modern Maori, where it has restricted distribution. It is also important to note that it may have implications of modality, as well as tense; cf. Lyons's remarks (1977, 677-678):

... the so-called future tense of the Indo-European languages (which is of comparatively recent development in many of them) and the so-called future tense of the relatively small number of other languages throughout the world that

have anything that might reasonably be called a future tense is partly temporal and partly modal.

It can refer to the present, as it does in the subordinate clause in

e.g.

(2107) Tēnā koe e noho mai nā i Ākarana
that you(sg) non-pt live hither there at(neut) Auckland
'Greetings, you who lives in Auckland'

and likewise in

(2108) I ēnei rā, mā te mīhini e mahi te
at(neut) these day by the machine non-pt work the
nuinga o ngā mahi
majority of the(pl) work
'These days, machines do most of the work'

although examples of this kind are rare. In the actor-emphatic (see 2.4.8), it commonly refers to the future:

(2109) Mā wai koe e whakahoki ki te kāinga?
by who you(sg) non-pt cause-return to the home
'Who will be taking you home?'

and future reference is also possible in other types of subordinate clause, e.g.

(2110) Ka kimihiā tētahi tikanga, e kitea
unspec search-pass. a certain plan, non-pt see-pass.
ai he moni
pro some money
'A plan will be sought whereby money may be found'.

However, there appear to be instances also where the reference is past:

- (2111) I ngā rā o mua, mā te hōiho kē
 at(past) the(pl) day of before by the horse instead
 te moua e tō
 the mower non-pt tow

'In former times, the mower was pulled by a horse instead',
 but the only clear examples involve the actor-emphatic, and they may
 be due to the strict co-occurrence of mā ... e and nā ... i, though
 it is difficult to see why nā was not used here. It must thus be assumed
 that e is essentially non-past. It is apparently absolute rather
 than relative tense, since no adverb is required for non-past reference
 to be established.

Chung is not entirely correct in her claim (1978, 21, quoted above)
 that e is now restricted to embedded clauses: it still occurs as the
 tense marker of certain negative clauses, e.g.

- (2112) E kore e roa, ka haere atu rātou
 non-pt not non-pt long unspec move away they(pl)
 'It won't be long before they go',

and the e of ēhara, although not written as a separate word, appears
 to be the same form, e.g.

- (2113) Ehara tēnei kau i te pākākā!
 not this cow at(neut)the brown
 'This cow is not brown!'

Of the four markers of absolute tense in Maori, e is the only
 one which does not function as a preposition of spatial location.
 It is also the form with the most defective distribution.

2.3.4.4

Markers of Relative Tense

Basically, these are the markers which have occasioned the greatest disagreement among Maori scholars.

Ka

This is glossed in this work as 'unspecified', since it appears to be a marker purely of relative tense: it is past, present or future as occasion specifies. Thus we find:

- (2114) I te whitu karaka, ka tangi te pere,
 at(past) the seven o'clock unspec sound the bell
 ka †Tmata te mahi
 unspec start the work
 'At 7 a.m., the bell rang and work started',

where it is past in the presence of a past time adverbial; and

- (2115) A te waru karaka, ka tae mai
 at(fut) the eight o'clock unspec arrive hither
 '[It] will arrive at eight o'clock',

where it is future in the presence of a future time adverbial. However, in the absence of an adverbial, and out of context, it was interpreted by my informants as present, e.g.

- (2116) Ka hari ia i ngā pukapuka ki te whare
 unspec carry he prep the(pl) book to the house
 'He carries the books to the house'

- (2117) Ka kata ia ki a Mārama
 unspec laugh he to pers Marama
 'He laughs at Marama'

- (2118) Ka wareware au
 unspec forget I
 'I forget'.

This bears out Comrie's suggestion that with relative tense, the point of reference is the present in the absence of specific information to the contrary.

Most important, perhaps, ka is the basic marker of narrative, and it is presumably this which led to the notion 'inceptive', and to remarks like those of Harawira, Wills and Ngata, quoted above. Harawira seems to me to come closest to assessing the function of ka accurately, although his phrase "regardless of tense" is somewhat unfortunate. Lyons's remarks (1977, 689)

... there are many languages that have what is commonly described as a special narrative or consecutive tense: this is not a tense, in the narrower sense of the term 'tense' adopted here. Its function is non-deictic, and it is used in the historical mode of description to chronicle, or narrate, the occurrence of serially ordered events, without regard to their pastness, presentness or futurity or to any other deictic notion

seem to me to describe this function of ka most insightfully. (This also explains why the majority of examples with ka in this work are translated with the English past tense: this is the form English normally uses for serially ordered events.)

The term "inceptive", and the justification given for it, while they may be attempts to capture this function, seem to me to be unfortunate in certain respects. Firstly, almost all the explanations describe ka as if it occurred only with actions, but it is not excluded from occurrence with states, e.g. (2118) above, and with statives, e.g.

(2119) I te ata o te Tāite, ka oti
 at(past) the morning of the Thursday unspec finished
 ngā hipi te kuti
 the(pl) sheep the shear
 'On Thursday morning, the shearing was finished'

- (2120) Ka riri au
 unspec angry I
 'I am angry'.

Secondly, one of the important functions of kua appears to be as an inchoative marker (see below), and the descriptions of inceptive ka often appear equally applicable to kua.

It must also be pointed out that, despite Chung's remark, ka is not totally excluded from embedded sentences, since it can occur in sentential complements, e.g.

- (2121) Nā, kia mōhio mai koe, ka riro
 now let be know hither you(sg) unspec take
 māku anō e utu te toenga
 by-me self non-pt pay the remainder
 'Now, you should know that I have undertaken to
 pay the remainder myself'.

E ... ana

This appears to combine relative tense with progressive aspect. Because the tense is relative, this is usually regarded as a purely aspectual marker. However, it is interpreted as present if the context fails to specify its time reference, and as this is characteristic of relative tense, it seems to me justifiable to include it here. Thus

- (2122) E hoki ana tātou ki te kāinga
 pro- return -gress we(incl,pl) to the home
 'We are returning home'

was interpreted (out of context) as present. In the presence of a future time adverbial, it can mark future, e.g.

- (2123) E haere ana tātou ki te toa āpōpō
 pro- move -gress we(incl,pl) to the store tomorrow
 'We are going to the shop tomorrow'.

With a past time adverbial, it is interpreted as past, e.g.

- (2124) I a Tamahae e moe ana ...
 at(past)pers Tamahae pro- sleep -gress
 'While Tamahae was sleeping ...'.

It seems to me odd, in the light of such examples, to claim as Biggs does, that the e of e ... ana is the non-past e discussed above. It is also translated by an English past tense when it occurs in narrative, as the following example did:

- (2125) E iri mai ana ngā tuna a Hata
 pro- hang hither -gress the(pl) eel of Hata
 'Hata's eels were hanging there',

but this use is probably rightly regarded as purely aspectual.

The gloss for this discontinuous form was physically problematic; a discontinuous gloss, 'pro- ... -gress', has been used, as the most satisfactory.

2.3.4.5 Aspectual Particles

There are two particles which appear to be aspectual without any associated tense distinction.

Kua

This is regarded by all the scholars quoted as a marker of perfective aspect, and this is undoubtedly one of its important uses, e.g.

- (2126) Kua tae mai ngā kau
 perf arrive hither the(pl) cow
 'The cows have arrived'
- (2127) Kua tangi te wīhara a te rewherē
 perf sound the whistle of the referee
 'The referee's whistle has sounded'.

However, with stative verbs, it frequently indicates that the state has been entered into, e.g.

- (2128) Kua riri a Hata
 perf angry pers Hata
 'Hata is angry', 'Hata has become angry'.

The notion of 'completed action' recedes here into the background.

A completed action (becoming) leads to a new state, and it is the state which receives the attention. Such examples appear to be inchoative, rather than perfective, although these two notions are plainly closely related. It is not only with the stative verbs in Maori that kua is inchoative, rather than perfective. Consider the following with an experience verb (see 2.3.7), which is semantically stative:

- (2129) Ka hoki mai a Kupe, kua mōhio ia
 unspec return hither pers Kupe perf know he
 kua mate a Hoturapa, kua wātea a Kura māna
 perf dead pers Hoturapa perf free pers Kura for-he
 'When Kupe returned, he knew (got to know)
 that Hoturapa was dead, and that Kura was
 free for him'.

The first kua here certainly does not co-occur with an action completed at the time indicated by the first clause. The second

and third kua are probably also inchoative, rather than perfective. In addition, there are examples with non-stative verbs (regardless of the sense of 'stative') which must also be seen as inchoative:

- (2130) Kua kanikani ētahi o ngā tāngata
 perf dance some(pl) of the(pl) people
 'Some of the people have started dancing'.

This does not mean that the dancing is over ('Some of the people have danced'), but that it is on-going. One informant preferred the translation 'Some of the people are dancing', saying that kua here was equivalent to kei te, but this was apparently a reaction to the fact that the English gloss with start can be translated more literally, using tīmata 'start'.

Kua has been glossed throughout as perf(ective), but its extension to the inchoative must be borne in mind. It must also be pointed out that although kua is restricted in its occurrence in embedded clauses, it is not true to say, as Chung does, that kua is excluded from such contexts. It occurs for example in relative clauses with certain kinds of verb, e.g.

- (2131) He tino nui tēnei hōnore, kua riro mai
 cls very big this honour perf take hither
 nei i a koe
 here from pers you(sg)
 'This honour which you have received is very great',

and it also occurs in sentential complements, e.g. (2129) and

- (2132) Ka tae te whakaatu ki a Tamahae,
 unspec arrive the advice to pers Tamahae
 kua whakawhiwhia ia ki tētahi o
 perf cause-receive-pass. he to a certain of

ngā karahipi Māori

the(pl) scholarship Maori

'Tamahae received a notice that he had been awarded one of the Maori scholarships'.

Ai

Remarkably little information about the aspectual use of this particle appears in previous grammars; many do not even mention it. Unlike the other particles discussed here, it occurs in post-head position. It is used for habitual action in both past and present, and informants describe it as common in this use, e.g.

(2133) Waiata ai ngā tamariki i te kura
sing habit the(pl) children at(neut) the school
'The children sing at school'

(2134) I ērā atu tau, ruku noa iho ai
at(past) those away year dive comparative habit
ngā tamariki mō te kotahi kapa
the(pl) children for the one penny
'In former years, the children would dive for only a one penny piece'

(2135) Patua ai mātou mō te kōrero Māori
beat-pass. habit we(excl,pl) for the talk Maori
i te kura
at(neut) the school

'We used to be beaten for talking Maori in school'.

It was not clear whether, out of context, a present tense reading was normal, past tense readings being obtained only when an adverb

(or something else in the context) demanded it. Some dialects do not have ai by itself as the habitual marker, but have a discontinuous marker e ... ai, positioned as e ... ana. It seems likely that this represents the older form, the construction in (2133)-(2135) presumably arising from ellipsis. I had access to only one informant who required e ... ai, and he was very unsure of the rendering of (2135) in his dialect. Speakers who require only ai do not appear to regard the construction as elliptical, and thus, for them, ai appears to have assumed the function of an aspectual marker.

2.3.4.6 Summary

It appears from this survey that the tense distinction of Maori is past versus non-past, and that there are three aspectual distinctions, progressive, perfective, and habitual. In addition, there is one marker of relative tense. Thus the forms appear to pattern:

		progressive	perfective	habitual
past	i	i te		
non-past	e	kei te		
no time marking	ka	e ... ana	kua	ai

While many previous scholars have established sections of this system, this is not in complete agreement with any of them. It will become clear in the course of Chapter 3 that no discussion of tense in Maori is complete without a consideration of a number of prepositions which do not function as verb-phrase particles. The relationships between local prepositions and the tense-aspect particles must also be discussed.

Williams's and Biggs's comments are given here since most others seem to derive from one of them. Williams calls kia 'the subjunctive' (1862, 39), and says it is used "after a word expressing request, command, advice, consent, or permission to another person to do anything", and advises "In a clause expressing the object in view use the subjunctive followed by the particle ai". He also notes (1862, 36) its use in imperatives. Biggs calls it 'Desiderative' (1969, 34), commenting "Indicates that it would be desirable for something to occur, or exist. In a subordinate clause kia indicates purpose". No clear picture of the function of kia emerges from comments of this kind.

Kei is glossed 'might', and appears to be a different morpheme from the preposition kei 'at (present)'. It introduces main clauses and certain subordinate clauses which appear to be adverbial. Williams (1862, 38) associates it with 'lest' or 'that ... not'. Biggs calls it a 'warning' particle (1969, 34) and comments that it is translated 'do not' or 'lest'. Hohepa (1967, 18) glosses it 'caveat'. Again, it should be clear from the paucity of information that the function of kei is not particularly well understood.

2.3.6 Stative Verbs

This group of verbs has always been recognized as distinctive in Maori, but as their syntactic and semantic peculiarities will play an important part in the discussion to follow, it is necessary to provide a brief discussion of them here.

Williams calls these verbs 'neuter verbs', 'participles' or 'verbal adjectives'. He is obviously aware that the term 'participle'

is rather misleading, but he claims they are (1862, 48) "participial in meaning", listing twenty of them. He notes that adjectives can be used similarly, and adds the following comments about the tenses of these verbs (1862, 49):

.. the notion of becoming, which is peculiarly characteristic of the inceptive [i.e. with ka - WB] appears also in some of the other tenses.

The imperfect tense with e ... ana is not used with participles, all of which imply a completed condition.

Of their syntax, he notes further that the preposition i is used with them for the agent or instrument (1862, 50), and notes that they also occur in a further construction involving what he calls an "explanatory verb" "in the infinitive mood" (see below).

After Williams, little new was added until Biggs's first publications on Maori grammar (e.g. 1961, 1969). It was Biggs who introduced the term 'stative' for them, and this usage is adhered to here. This is an improvement on Williams's terminology, although it creates some problems in a modern linguistic context.

As has been stated earlier (2.1.4), the major distinguishing feature of these verbs is that they do not occur in the passive. They have only one obligatory argument, which is \emptyset -marked, e.g.

(2137) Kua matakū au
perf afraid I
'I am afraid'.

If the cause of the state is expressed, it is marked by the preposition i, glossed 'from' in this work (as distinct from e 'by', which occurs with the agent in the passive), e.g.

(2138) Kua matakū au i te kēhua
perf afraid I from the ghost
'I am afraid because of the ghost'.

Te kuti is of course nominal in form, and this is presumably why Biggs calls them 'pseudo-predicates'. The constituents always appear in this order. If a causer is added, the preposition used depends on the positioning of the phrase: if it follows the stative verb, i is required; if it follows the non-stative, e is required, although this verb is never passive:

- (2143) Ka oti ngā hipi i a Rewi
 unspec finished the(pl) sheep from pers Rewi
 te kuti
 the shear
 'Rewi has finished the sheep-shearing'
- (2144) Ka oti ngā hipi te kuti e Rewi
 unspec finished the(pl) sheep the shear by Rewi
 'The sheep-shearing is finished by Rewi'.

While the syntactic analysis of such constructions remains something of a puzzle, it is not discussed further here, since it does not impinge on the central concerns of the following chapters.

Chung notes (1978, 28-29) that i phrases are usually indirect agents or causes, but her discussion implies that they are not necessarily associated exclusively with stative verbs. I have no evidence to support this, and such phrases are accordingly discussed here as though they occur only with statives.

The membership of this class of verbs is apparently not closed, in that any adjective can potentially be used thus, e.g.

- (2145) Kei te marino tonu te moana
 at(pres) the calm still the sea
 'The sea is still calm'.

However, there appears to be a (fairly large) group of forms not commonly used attributively (e.g. oti, mau, mutu, mahue) which constitute a class of stative verbs.

Williams's comment about the restriction of e ... ana from co-occurrence with these verbs does not appear to hold true for modern Maori, since there are attested numerous examples like

(2146) Kei hea a Tamahae e ngaro ana?

at(pres) where pers Tamahae pro- missing -gress

'Where is Tamahae hiding?'

which contain e ... ana with statives.

As was mentioned earlier, this use of the term 'stative' does not coincide with the use of the term in the wider linguistic literature, where the term covers, in addition to 'adjectives', verbs like know, which also express states, rather than actions. The class referred to as stative in the wider literature is not a syntactically homogeneous class in Maori; verbs like know are discussed in the next section. This causes a terminological problem, since Maori requires two labels. Chung calls the verbs discussed in this section 'stative intransitives' (1978, 29), but since there are verbs like mau 'caught' which frequently have two arguments, and can be difficult to distinguish semantically from English transitives, that seems to be undesirable. Since 'stative' appears to be fairly accepted usage amongst Polynesianists for these verbs, it also seemed undesirable to select a new label. It will therefore be the practice in what follows to mark the term stative as it is used in the wider literature with some appropriate identification, e.g. 'Anderson's statives', retaining the unmarked term for this group of verbs in Maori.

2.3.7 Experience Verbs

Unlike the stative verbs, the distinctness of the verbs to be discussed in this section has not been generally recognized by writers on Maori grammar. In fact, Chung (1978) is the first to mention them in print to my knowledge. She calls them 'middle' verbs (1978, 47), regarding them as a subclass of transitive verbs, as opposed to 'canonical transitives'. Her term 'middle' has not been adopted here, since her term is frequently applied to reflexive verbs in other languages, and this does not seem a relevant or helpful association. Reedy (1979) also recognizes them as a distinct group, and it is his label 'experience verbs' that has been adopted here. He, however, believes them to be intransitive. The question of their transitivity will be taken up again in some detail in 4.4, but it will suffice now to say that my informants found sentences with these verbs and only one nominal argument incomplete, and they are therefore treated here as requiring two arguments, i.e. as bivalent. It will nevertheless be suggested in 4.4 that they should perhaps not be regarded as transitive in the most usual sense of that term.

The central members of the group of experience verbs are notionally stative, but the group is not entirely clear-cut, and certain verbs which share some of the syntactic characteristics of the central group do not seem to be notionally stative. Chung (1978, 47), discussing these verbs in relation to several Polynesian languages, defines them thus:

... perception verbs ('see', 'listen to'), verbs of emotion and other psychological states ('love', 'want', 'understand'), verbs normally selecting animate direct objects, including some communication verbs ('meet with', 'help', 'call'), and verbs such as 'follow', 'wait for', and 'visit'

but she notes that in particular languages, some of these may be 'canonical

transitives' (1978, 93). Awhina 'help' in Maori appears to be one such case. Experience verbs are important because of their syntactic behaviour, but this appears to be far from uniform. For example, there are two tests which appear to identify the central members equally well, but they often give different results with less clear cases. The first test is compatibility with the question

(2147) I aha ia?

past what he

'What did he do?/What happened to him?'.

Central members of the class do not form suitable answers here. The second test is occurrence with the actor-emphatic construction (see 2.4.8): again, this is not possible for the central members of the group. In addition, the majority of the experience verbs have their second argument marked with ki, but not all of them. The major syntactic properties which distinguish these from transitive verbs are discussed in 4.3 and 4.4. Here, the patterning of some of the commoner verbs with the above tests is tabulated.

	with actor- emphatic	with <u>aha</u> question	<u>ki</u> for 2nd argument
mōhio 'know'	*	*	✓
pTrangi 'want'	*	*	✓
kite 'see' ¹	*	*	*
rongo 'hear'	*	*	✓ or * ³
wareware 'forget'	*	*	✓
maumahara 'remember'	?	*	✓
ariariā 'resemble'	*	*	✓
whakapono 'believe'	*	✓	✓
whakakino 'dislike' ²	*	✓	✓

¹ kite 'discover' is not an experience verb

² whakakino 'attack' is not an experience verb

³ rongo takes either i or ki

	with actor- emphatic	with <u>aha</u> question	<u>ki</u> for 2nd argument
tūmanako 'hope, expect'	*	✓	✓
mauāhara 'hate'	*	✓	✓
hiahia 'desire'	*	✓	✓
hThiri 'long for'	*	✓	✓
mahara 'recollect'	*	✓	✓
māharahara 'worry'	*	✓	✓
mTharo 'marvel at'	*	✓	✓
piripono 'be faithful'	*	✓	✓

It thus appears that the actor-emphatic may be the most reliable test, but it is also impossible with intransitive verbs, and is therefore not a sufficient test. For example, tūtaki 'meet' was very uncertain with the actor-emphatic, but possible with the aha question, and it has its second argument marked with ki. However, it could well be intransitive, with a ki phrase as Goal. If the aha-question is taken as the most reliable test, then relativization properties (for example, see 4.3) are not predictable for these verbs. It thus appears that the experience verbs do not form a class with well-defined boundaries, although the central members of the class exhibit consistent behavioural properties which differentiate them from other bivalent verbs.

2.3.8 Passive Morphology

The status of the passive in Maori has been the subject of considerable debate, and these issues will be discussed in 2.4.7. However, it seems appropriate here to deal with the structure of the passive form of the verb.

The morphology of the passive form in Maori was first raised as an interesting problem by Hale, in his review of Hohepa (Hale, 1968),

although Pearce's (1964) attempt to find phonological regularities underlying the distribution of the various suffixes is indicative of the fact that the variety of forms had interested linguists prior to Hale. The following forms provide a sample of the data to be accounted for:

ako 'learn'	ako-na
aroa 'love'	aroa-ina
hao 'fish'	hao-a
huri 'turn'	huri-hia
inu 'drink'	inu-mia
hanga 'build'	hanga-a (= hangā)
kai 'eat'	kai-nga
karanga 'call'	karanga-tia
mau 'seize'	mau-ria
noho 'sit'	noho-ia
pā 'touch'	pā-ngia
tomo 'enter'	tomo-kia

The suffixes have been hyphenated so that the diversity of form will be readily apparent. This list of forms is not exhaustive: a few exceptional forms which occur with only one verb have been omitted. An exhaustive list can be found in Haslev (1978, 1273). Hohepa's approach (1967, 106) was to subclassify verbs according to the ending they took, and then to write a rule which changed the suffix -tia, introduced in the rule generating passives, into the required suffix. Thus part of his rule 67 is

$$T_{ob} \quad N_e \quad \sim \quad \underline{tia} \quad \rightarrow \quad N_e \quad \sim \quad \underline{hia},$$

i.e. the grammar generates huritia, which is then converted to hurihia.

Hale, however, (1968, 86) proposes an alternative treatment, which treats the consonant of the passive suffix as part of the underlying stem.

Thus he posits an underlying stem inum- 'drink', hurih- 'turn' etc. His grammar then requires passive suffixes:

$$\text{passive suffix} \rightarrow \left\{ \begin{array}{l} -ia / C- \\ -a / V- \end{array} \right\}$$

This will account for all the forms above except ako - akona, aroha - arohaina, kai - kainga and noho - nohoia. The first three are essentially treated as exceptions:

(ako)nia	→	(ako)na
(aro)ha)nia	→	(aro)ha)ina (after stems in -a)
kaingia	→	kainga.

Noho is treated as having an underlying consonant which is deleted: p, and the derivation is thus

$$\text{nohop-} \rightarrow * \text{nohopia} \rightarrow \text{nohoia.}$$

(No stems in -p are attested.)

To support his analysis, Hale points to the fact that (1968, 87) the nominalizations often contain the same consonant. Thus we find:

(ti)tiro 'look'	tiro <u>h</u> ia	tiro <u>h</u> anga
kōrero 'talk'	kōrero <u>t</u> ia	kōrero <u>t</u> anga
hopu 'catch'	hopu <u>k</u> ia	hopu <u>k</u> anga
whakatupu 'cherish'	whakatupu <u>r</u> ia	whakatupu <u>r</u> anga

Thus it appears that there is historical evidence for Hale's proposal taking the consonant as part of the stem. However, he points out that Hohepa may nevertheless be justified synchronically in not doing so. There are no final consonants in Maori today. Thus Hale suggests that a form like inumia, while historically inum-ia, has been reanalysed as inu-mia to fit with changed syllable structure. He points out that

this is in accordance with a possible tendency to have the uninflected form (inu) as close to the underlying base form as possible, whereas the stem-final consonant position involves deriving the uninflected form, inu, by deletion from inum-. It certainly seems that there is no justification synchronically for Hale's proposal, since it means positing stems of a phonological shape impossible according to the constraints of the syllable patterns of the language. (Buse, faced with the same situation in Rarotonga, explicitly rejects the synchronic validity of such a derivation (1965, 38ff).) Furthermore, speakers vary in their choice of suffix, so that, for instance

kōrerotia	~	kōrerohia
pāngia	~	pākia
tīmataria	~	tīmataia.

There are also cases where the nominalization of the verb does not match the passive; thus we find

tīmata	.tīmataia	tīmatanga	(not *tīmatapanga > tīmatānga)
pā	pāngia	pānga	(not *pānganga).

It is also worth mentioning (and Hale is also aware of this: 1968, 87, fn4) that when adverbials take a passive ending in agreement with the verb, the ending is always -tia, yet it would seem somewhat odd to posit that all such adverbials had a stem-final consonant t. Although there seems to be some evidence here, and also from the fact that -tia is currently spreading at the expense of the other endings, that -tia is the basic form (this presumably lies behind Hohepa's choice of -tia as the unmarked form), it is also interesting to consider the passives of transliterated forms, since these cannot historically have had underlying consonants, and they might thus be expected to select -tia in all cases.

However, we find

heu 'shave' heu-a

kuki 'cook' kuki-a

kura 'school' kura-ina,

although the great majority appear to take -tia.

The consequences of all this for the status of the Maori passive will be taken up again in a later section. Here it remains only to mention the phenomenon of adverbial agreement just noted. When the verb in a phrase is passive, and accompanied by a modifier, the modifier may take the ending -tia in agreement with the verb. The modifiers which behave in this way are not readily specified. Ngata (1964, 24) and Biggs (1969, 115) both state that manner adverbials do so, and Biggs also claims that

Any base in the second position in a passive phrase will take the passive termination -tia in agreement with the first base in the phrase.

(where a base is "a word which expresses lexical meaning and fills the nucleus position in phrases"). This covers such forms as katoa 'all', which can be moved into the verb phrase by Quantifier Float (see 4.1.22), although it does not, strictly speaking, modify the verb. Thus we find

(2148) Tapaia tonutia atu te wāhi i mahue
 call-pass. indeed-pass. away the place past leave
 nei i a Rua ko Whangaparāoa
 here from pers Rua top. Whangaparaoa
 'And so the place Rua left was called Whangaparaoa'

(2149) I pēhia rawatia ngā wāhine
 past oppress-pass. very-pass. the(pl) women
 'The women were badly oppressed'

- (2150) I whakahokia katoatia ngā pukapuka e Hone
 past cause-return-pass. all-pass. the(pl) book by John
 'All the books were returned by John'.

However, certain forms such as hoki, anō do not appear with this agreement suffix.

2.4 The Grammar of the Sentence

2.4.1 Order of Constituents

As stated in 2.1.1, the basic order of constituents is VS(0). Other types of adverbial phrase follow these constituents, apparently according to some principle of semantic closeness to the obligatory constituents. The basic nominal phrases can also appear in the reverse order if the Subject is weighty. Thus Heavy NP Shift apparently functions in Maori in a fashion similar to many other languages. Time adverbials, and a few others which appear to be of desentential origin, can precede the verb, and there are two constructions discussed later in 2.4 whose function is to prepose a nominal phrase before the verb, but these latter are marked constructions. Nominal sentences require a separate section (see 2.4.5). The following examples illustrate these principles of constituent ordering, which hold for main and subordinate clauses:

- (2151) Kei te waiata rāua
 at(pres) the sing they(2)
 'They are singing'
- (2152) Kua kite ia i te auahi
 perf see he prep the smoke
 'He has seen the smoke'

(2153) Kei te hari rāua i te kirimi ki te rori
 at(pres) the carry they(2) prep the cream to the road
 'They are carrying the cream to the road'

(2154) Ka haere ngā tāngata ki te whakareri i
 unspec move the(pl) people to the cause-ready prep
 te marae mō te tangihanga
 the marae for the funeral
 'The people are going to prepare the marae for the funeral'.

There is only one case where constituents must appear in a specific order:
 when an i-phrase expressing a source, and a ki-phrase expressing a goal
 co-occur, the i-phrase must precede (to avoid ambiguity):

(2155) I hoki ia i te tāone ki te pāmu
 past return he from the town to the farm
 'He returned from the town to the farm'

(ki te pāmu i te tāone would mean 'to the farm in town'). With time
 adverbials:

(2156) I te whitu karaka i te pō, ka
 at(past) the seven o'clock at(neut) the night unspec
 haere a Hata mā
 move pers Hata and others
 'At seven at night, Hata and company left'

(2157) Wehe atu ai rātou i te rua karaka
 leave away pro they(pl) at(past) the two o'clock
 'They left at two o'clock'.

Examples of marked orderings of basic constituents attributable to
 Heavy NP Shift are:

- (2158) Kua whakahokia ki a ia te tamaiti i
 perf cause-return-pass. to pers she the child past
 mauria e ngā pirihiimana i te marama
 take-pass. by the(pl) policeman at(past) the month
 o Oketopa
 of October
 'The child who was taken by the police in October
 has been returned to her'

- (2159) Kei te āwhina i a ia ngā tamariki
 at(pres) the help prep pers she the(pl) children
 katoa o te tāone o Te Kaha
 all of the town of Te Kaha
 'All the children of Te Kaha are helping her'.

2.4.2 Imperatives

Imperatives are formed differently for different classes of verbs in Maori, and it is thus necessary to discuss each of these separately.

Intransitives have imperatives formed by the verb stem preceded by the imperative particle e if the stem has two vowels or less:

- (2160) Haere ki te kura!
 move to the school
 'Go to school!'
- (2161) E moe rā!
 imp sleep there
 '[Go to] sleep!'

(This e is apparently unrelated to the tense marker e, and to the passive agent marker e, since these do not have the same phonological restriction on their occurrence.)

Bivalent verbs (i.e. those which require two arguments) form imperatives using the passive, e.g.

- (2162) Patua te manu rā!
 shoot-pass. the bird there
 'Shoot that bird!'

Since there are no passive forms of verbs which contain only two vowels or fewer, the imperative particle never appears with bivalent verbs.

With statives, there appears to be some doubt as to the complete generality of imperative formation, but in those instances where it is possible, the mood particle kia is used:

- (2163) Kia tere!
 let be fast
 'Hurry!'
- (2164) ?Kia mau a Tamahae
 let be caught pers Tamahae
 'Catch Tamahae'.

(Most speakers seem to find the latter acceptable, but one felt that in examples like this it was obligatory to express the addressee.)

It appears that some experience verbs do not normally imperativize, although many do. Mōhio 'know', for instance, appears not to, but one informant provided the following:

- (2165) Kia mōhio koe ko au te rangatira o tēnei pā
 let be know you(sg) eq I the chief of this pa
 'You take note of the fact that I'm chief of this pa'.

This is, however, not an imperative in function, and thus it seems that it would be unwise to give too much weight to the form here using kia.

Biggs mentions (1969, 60) that "imperative intonation" is required with all these types of imperative, but provides no further details.

As far as I have been able to determine, this consists of a fall from high on the first syllable of the imperative, regardless of whether this is a particle or part of a lexical verb.

If addressees are specified, they most frequently follow the imperative forms above. If the addressee is a proper name of two vowels or less, it is preceded by the vocative particle e. Whether this is distinct from the imperative particle it is impossible to know. Both appear under similar phonological conditions, which suggests that they may be the same, but if they are then e is unique in Maori in occurring with both nominal and verbal phrases. The issue is not an important one for the purposes of this work, and a conservative approach has been taken: the two uses of the particle are glossed differently. (E also occurs with certain numerals, usually specified as 2-9, but these all have the phonological shape of two vowels or less, and again, it seems probable that it is the same particle used to produce phrases of a desired phonological shape. (For some comments on this aspect of Maori see 4.3.3.1.) That particle is also glossed differently here - as num(eral marker).)

Examples of imperatives containing addressees are:

- (2166) E oho, Tamahae!
 imp wake Tamahae
 'Wake up, Tamahae!'
- (2167) Haere, e Rewi!
 move voc Rewi
 'Move, Rewi!'
- (2168) Tangohia ō hū, Tamahae!
 take-pass. your(pl) shoe Tamahae
 'Take off your shoes, Tamahae!'

- (2169) Whakapaītia te tēpu, e Mere!
cause-good-pass. the table voc Mere
'Set the table, Mere!'
- (2170) Kia mau a Tamahae i a koe!
let be caught pers Tamahae from pers you(sg)
'You catch Tamahae!'
- (2171) Kia tere, tamariki mā!
let be fast children and others
'Hurry, children!'

The vocative rule was stated as applying to proper names, because we find

- (2172) Haere koe!
move you(sg)
'You go!'

Finally, to illustrate that the addressee may precede, we find:

- (2173) Tamahae, e oma ki a Rewi!
Tamahae, imp run to pers Rewi
'Tamahae, run to Rewi!'

2.4.3 Questions

Questions may be asked in Maori using the form of a statement, but with question intonation, which appears to take the form of a high rise at the end of the utterance. However, there are also questions formed using question words, which appear to end with falling intonation, but have the highest pitch on the question word. These question words normally occur in the same sentence position as would be held by the word required in the answer. Wai is the interrogative corresponding to persons, aha for non-persons and actions, hea for locations (temporal

and spatial), hia for numbers, pēhea for diverse other adverbial functions, and tēhea corresponds to English which in implying choice from a limited set of objects. The following examples illustrate the usual question forms in Maori:

- (2174) Ko wai tō tātou matua, ā, kei hea e
 eq who our(sg) parent and then at(pres) where pro-
 noho ana?
 live -gress
 'Who is our father and where does [he] live?'
- (2175) I pakaru i a wai te poti o Hata?
 past broken from pers who the boat of Hata
 'Who smashed Hata's boat?'
- (2176) He aha kei runga i te tēpu?
 a what at(pres) the top at(adnom) the table
 'What is on the table?'
- (2177) E aha ana tātou inaianeī?
 pro- what -gress we(incl,pl) now
 'What are we doing now?'
- (2178) Kei te haere koe ki hea, e RT?
 at(pres) the move you(sg) to where voc Ri
 'Where are you going, Ri?'
- (2179) Inawhea koe i haere ai?
 when you(sg) past move pro
 'When did you go?'
- (2180) E hia ngā poaka?
 num how many the(pl) pig
 'How many pigs are there?'

(2181) He pēhea te hōiho nei?
 cls how the horse here
 'What is this horse like?'

(2182) Ko tēhea pō tēnei?
 eq which night this
 'Which night is this?'

There appears to be only one important set of exceptions to this characterization of question formation. Questioning the actor in a non-stative predication requires the use of either ko-fronting or the actor-emphatic. Thus (2183) and (2184), formed by the above rule, are at best echo-questions:

(2183) Kei te whāngai a wai i ngā kāwhe?
 at(pres) the feed pers who prep the(pl) calf
 'Who is feeding the calves?'

(2184) Kua hoki a wai ki te kāinga?
 perf return pers who to the home
 'Who has gone home?'

With the intransitive, the usual question uses ko, thus:

(2185) Ko wai kua hoki ki te kāinga?
 top. who perf return to the home
 'Who has gone home?'

With transitives, tense appears to play an important role in determining the question form used. The actor-emphatic is normal for past (nā) and future (mā), e.g.

(2186) Mā wai e whāngai ngā kāwhe?
 by who non-pt feed the(pl) calf
 'Who will feed the calves?'

No other tenses are possible with the actor-emphatic, and ko is used in other instances, e.g.

- (2187) Ko wai kei te whāngai i ngā kāwhe?
 top. who at(pres) the feed prep the(pl) calf
 'Who is feeding the calves?'

While ko questions with past and future tenses are syntactically possible, they are judged odd. Echo-questions with transitives normally use special intonation, rather than special syntactic form. The same rules govern the questioning of the agent in the passive. The substitution of wai there gives an echo-question, e.g.

- (2188) Ka pūhia te pūru e wai?
 unspec shoot-pass. the bull by who
 'Who shot the bull?'

This will be seen to be semantically predictable when these two special constructions (ko-fronting and the actor-emphatic) are discussed later in this section. Surprisingly little attention has been paid by previous scholars to the area of question formation in Maori.

2.4.4 Negation

The most insightful and influential treatment of negation in Maori is Hohepa (1969a). Although the argumentation in this paper is tortuous at times, its conclusions seem substantially correct. Prior to Hohepa's paper, Maori grammarians with one notable exception had been able to say little about negation other than listing the negative form corresponding to each declarative type. Indeed, even in his 1973 revision of his 1969 grammar, Biggs continues to do this (e.g. p.62ff), although he mentions (p.76) Hohepa's analysis. The exception is Johansen, who states (1948, 13) that negatives can be analysed as verbs, although he does not elaborate on this.

Some of the data which has to be accounted for is presented here before Hohepa's analysis is outlined:

- (2189) Kāore a Hata i te whakarongo
not pers Hata at(neut) the listen
'Hata is not/was not listening'

negates both

- (2190) I te whakarongo a Hata
at(past) the cause-hear pers Hata
'Hata was listening'

and

- (2191) Kei te whakarongo a Hata
at(pres) the cause-hear pers Hata
'Hata is listening'.

- (2192) Kāore tātou e haere ana āpōpō
not we(incl,pl) pro- move -gress tomorrow
'We are not going tomorrow'

negates

- (2193) E haere ana tātou āpōpō
pro- move -gress we(incl,pl) tomorrow
'We are going tomorrow'.

- (2194) Kāore te tamaiti i patua e ia
not the child past beat-pass. by he
'The child was not beaten by him'

negates

- (2195) I patua te tamaiti e ia
past beat-pass. the child by he
'The child was beaten by him'

(or this with ka for i if ka refers to past time).

- (2196) Kāore a Tamahae e tango i ana hū
 not pers Tamahae non-pt remove prep his(pl) shoe
 'Tamahae doesn't take off his shoes'

negates

- (2197) Ka tango a Tamahae i ana hū
 unspec remove pers Tamahae prep his(pl) shoe
 'Tamahae takes off his shoes'

(provided ka does not refer to past time).

- (2198) Kāore anō he tāngata kia tae mai
 not yet some people comp arrive hither
 'Nobody has arrived yet'

negates

- (2199) Kua tae mai he tāngata
 perf arrive hither some people
 'Some people have arrived'.

As will be seen, sentence negation in Maori superficially involves

- i the use of the negator kāore, which in some dialects has the form kāhore; this always has initial sentence position;
- ii the placing of the subject of the affirmative in second position, preceding the verb of the affirmative;
- iii a rather complex set of correspondences between the verbal particles of the affirmative and the negative:

Affirmative	Negative
i	i
ka	i/e depending on time reference
i te	i te
kei te	i te
e ... ana	e ... ana
kua	kia.

Many of these correspondences obviously puzzled previous scholars, although all of them can be seen in the light of more recent scholarship to occur in other places in the grammar, as well as in the formation of negatives. We will return to them later.

Three further points about negation must be noted. In Western dialects, the negation of affirmatives with i 'past' is more usually kThai ... i. More importantly, there are two other negators which must receive our attention: kore 'never', 'not at all', and ēhara which is used principally in the negation of certain types of non-verbal sentences. Kore might be regarded as an emphatic negator. The construction with kore is illustrated by:

(2200) E kore e roa, ka haere atu rātou
 non-pt not non-pt long unspec move away they(pl)
 'It won't be long before they go'

(2201) Kore anō au e rongo ki te reo wahine e karanga ana
 not again I non-pt hear to the voice woman pro- call -gress
 'I will never hear again the voices of women calling in welcome'

(2202) Kore rawa ia e whiwhi
 not very he non-pt succeed
 'He will never succeed'

(2203) Kore rawa a Pou i whakarongo
 not very pers Pou past cause-hear
 'Pou didn't listen at all'.

Two characteristics of this construction are worthy of note. Firstly, it is rather uncommon in modern Maori to use kore preceded by e, although it appears that this may be linked to the general demise of e as a main clause verbal particle. Secondly, kore in my data is never followed by verbal particles other than e and i, which have been analysed here as

the two non-aspectually marked absolute tense markers in Maori. This appears to have escaped the attention of previous scholars. Hohepa (1969a, 22) claims, in fact, that only e is possible.

The other negator which assumes importance in the discussion is ēhara, which may be illustrated by the following, where (2204) negates (2205), and (2206) negates (2207):

(2204) Ehara tērā i a Tamahae
not that at(neut) pers Tamahae
'That's not Tamahae'

(2205) Ko Tamahae tērā
eq Tamahae that
'That's Tamahae'

(2206) Ehara Pani mā i ngā kuki
not Pani and others at(neut) the(pl) cook
'Pani and company are not the cooks'

(2207) Ko Pani mā ngā kuki
eq Pani and others the(pl) cook
'Pani and company are the cooks'.

Both these affirmatives are overtly equative, but ēhara also negates certain constructions which are not overtly equative, e.g.

(2208) Ehara nāna te pukapuka nei
not by-he the book here
'This is not his book'

negating

(2209) Nāna te pukapuka nei
by-he the book here
'This is his book'.

Thirdly, imperatives are negated with kaua, thus:

(2210) Kaua e kōrero teka
 not non-pt talk false
 'Don't tell lies!'

(2211) Kaua koe e hoko i te tariana nei ki a WT
 not you(sg) non-pt sell prep the stallion here to pers Wi
 'Don't sell this stallion to Wi'.

This, then, is the data which must be accounted for in any analysis of negation in Maori.

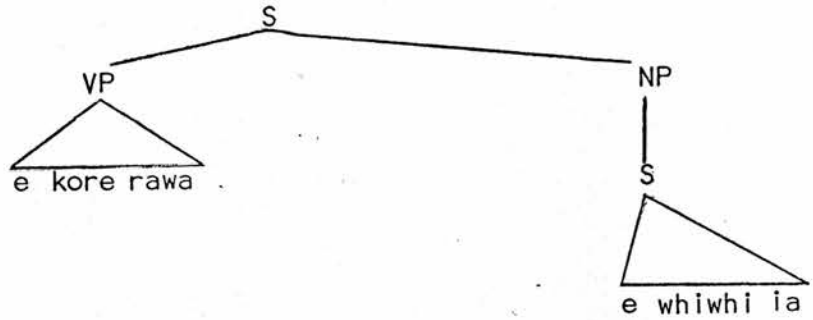
Hohepa's paper (1969a) concerns itself largely with the negators kore and ēhara. It is unnecessary to reproduce here his detailed arguments, but the essence of his analysis is this. Negation with kore and ēhara involves a higher negative predication, with a stative verb whose semantics indicate falseness, and an embedded predication whose subject is most frequently (though not obligatorily) raised into the negative predication. Much of his argument revolves round the need to show that kore and hara share a large number of properties with other stative verbs in Maori, which he does by adducing a list of properties of statives as opposed to other verb classes, and showing that kore and hara conform to them. He also argues that kore and hara must be in a higher predication because of certain facts about the distribution of the verbal particle e. Indeed, he goes further, and argues from the distribution of e that kore and hara must themselves be dominated by a higher predicate. This last step is not vital to the present analysis, however, and will be ignored for the present. According to Hohepa's analysis, the underlying structure of (2202), repeated here for convenience:

(2202) Kore rawa ia e whiwhi
 not very he non-pt succeed
 'He will never succeed'

which he must regard as an elliptical version of

- (2212) E kore rawa ia e whiwhi
 non-pt not very he non-pt succeed
 'He will never succeed'

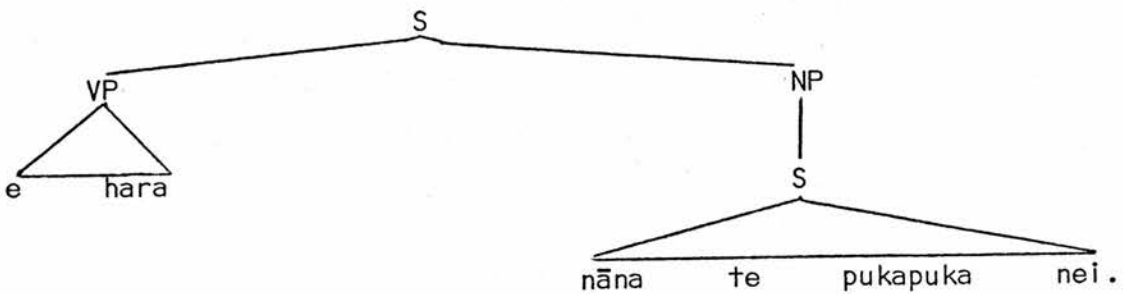
is schematically



The subject of the embedded S is then subjected to Raising to give the surface order. Similarly, the underlying structure of (2208)

- (2208) Ehara nāna te pukapuka nei
 not by-he the book here
 'This book is not his'

would be



Hohepa in fact appears to suggest that the deep structure would have ēhara i te mea, rather than ēhara in the higher S, but the details of this proposal are unclear.

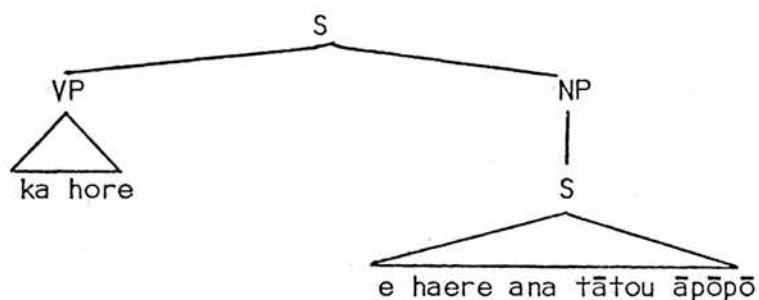
A little more must be said about the distribution of the tense/

aspect markers with these two negators. Firstly, Hohepa notes (1969a, 31) that kore can be preceded by markers other than e, and cites kua and i, as well as the subordinator kia. He does not mention the fact that in texts it occurs most commonly with no marker. Secondly, hara occurs only preceded by ē, and indeed ēhara is always one word orthographically (and phonologically, as stress indicates). Hohepa postulates a higher verb as explaining this distribution, but I am not sure that this is necessary. It appears to be beyond doubt that e has been reduced in distribution in recent times, and has not always been associated exclusively with embedded clauses. I would suggest that the large number of instances of kore with no verbal particle is explained by deletion of e from the main clause, a position in which it does not readily occur in modern Maori. (Elsewhere, substitution of ka has occurred, and this anomaly remains unexplained.) With hara, however, phonological fusion of e and hara occurred prior to the demise of e. The e of ēhara was not, therefore, associated with the verbal marker e at the time of its demise, and it thus remains. I do not have any evidence to support this, but it seems tenable, and an alternative to the proliferation of otherwise unmotivated higher predications.

Biggs points out (1969, 76) that the hore of kā(h)ore is also subject to the same analysis; hore is found as a stative verb which he glosses 'be nothing, negative', while the ka is the unspecified tense marker. Thus the underlying structure for e.g.

(2192) Kāore tātou e haere ana āpōpō
 not we(incl,pl) pro- move -gress tomorrow
 'We are not going tomorrow'

would be



with subsequent raising of the subject of the embedded sentence to give the surface order. This analysis of the kāore negatives provides some explanation of the distribution of the tense/aspect markers in negatives. Firstly, the progressive kei te, which is formed from the present locative preposition kei and the definite article, does not occur in negatives, but is replaced by i te. This would now be a particular instance of a more general rule: time-specific locatives do not occur in propositions containing another tense-marker, but are replaced by the neutral locative, i (see 3.1.7 for details). The same rules which exclude ka and kua from many (though not all) embedded sentences would exclude them here. The appearance of kia, one of the common subordinate clause markers, would also be governed by a rule required elsewhere.

Thus it can be seen that this analysis has a good deal of explanatory value. There are, however, some aspects of negation that remain unexplained. The first is that the negator kThai is isolated, since there is no evidence to suggest that such an analysis could be extended to it. If it represents an older form (and there is other evidence to suggest that the Western dialect area, where kThai is found, is more conservative than the East), then it is not clear that negation has always involved a higher predicate, and it is somewhat difficult

to imagine a well-motivated linguistic change which would lead to such an analysis being introduced. Secondly, the information available about kaua, the imperative negator, is puzzling. Superficially, it appears likely that it is ka + ua, and ua indeed exists. Consider Williams's comments in his dictionary:

Used in a somewhat obscure construction, generally followed by a plural possessive, the sense apparently being that the fact related is in conformity with the circumstances.

This is, of course, the direct opposite of the sense that might be expected if kaua was to be analysed as kāore has been. While such questions must be raised, however, it does not seem that they are sufficient grounds to reject the higher predicate analysis where it is possible.

One further, rather curious, oversight of previous grammars must be pointed out. Negative constructions are always described as though Raising was obligatory. This is not, however, the case: examples without Raising are attested where the subject NP is semantically prominent, e.g.

- (2213) Kāore i pau te tau, ka hoki ia ki te kāinga
 not past exhausted the year unspec return he to the home
 'The year was not over when he returned home'
- (2214) Kāore e tika tana kuti
 not non-pt correct his(sg) shear
 'He didn't shear straight'
- (2215) Kāore e tipu te hua whenua ki reira
 not non-pt grow the fruit land to there
 'Vegetables will not grow there'
- (2216) Kore rawa i whakahokia atu e Māhia ngā
 not very past cause-return-pass. away by Mahia the(pl)
 kura rā
 red feather there
 'Mahia never returned those red feathers'.

2.4.5 Non-verbal Sentences

These structures are very common in Maori, and although they are not one of the central concerns of the present work a little information about their structure is required for the understanding of examples later. It appears that a three-way classification of non-verbal sentences is required. Accounts in previous grammars have concentrated on specifying syntactically the distribution of ko and he in such structures. It seems to me, however, that a semantically based approach to the distribution of these forms may be more revealing. (The classification suggested here resembles in many respects that outlined by Reedy (lecture, VUW, September 1979), although he proposed five classes of non-verbal sentences, reached by breaking the prepositional group of the present account into three. He did not specify the criteria for these extra splits, and nor did he provide his justification for recognizing five groups, rather than, say, two or four. His terminology also differs from that used here.)

2.4.5.1 Equative Structures

These all have ko obligatorily with the first constituent, e.g.

(2217) Ko Pita au

eq Peter I

'I am Peter'

(2218) *Pita au

Peter I

(2219) Ko te moana tēnei

eq the sea this

'This is the sea'

(2220) *Te moana tēnei

the sea this

(2221) Ko te raumati te wā kauhoe

eq the summer the time swim

'Summer is the time for swimming'

(2222) *Te wā kauhoe te raumati

the time swim the summer

Both NPs in these sentences are always definite. The function of this ko is perhaps best seen as different from the topicalizing particle ko which is used in fronting subjects, although the fact that both occur only with definite NPs suggests that they are related. The major advantage in postulating two ko's comes from the fact that in equative sentences it is possible to front the \emptyset -marked NP with ko, as in

(2223) Ko te wā kauhoe, ko te raumati

top. the time swim eq the summer

'Summer is the time for swimming'.

As will be argued later, topicalizing ko takes definite subjects, which are \emptyset -marked, and places them in sentence-initial position. If we adopt the analysis which distinguishes two ko's, then the transformation of (2221) into (2223) will not require a separate rule, since (2221) can be seen as a predicate-subject structure:

[ko te raumati]_{pred} [te wā kauhoe]_{subj}.

The second ko occurs only introducing the predicates of equative sentences. Equative sentences negate with ēhara, e.g.

(2224) Ehara tērā i a Tamahae

not that at(neut) pers Tamahae

'That is not Tamahae'.

2.4.5.2 Classifying Structures

These all have he obligatorily with the first constituent, e.g.

(2225) He roto tēnei

cls lake this

'This is a lake'

(2226) He whero tēnei whare

cls red this house

'This house is red'

(2227) He āhua tawhiti tonu atu a Omāio

cls somewhat distant indeed away pers Omaio

'Omaio is indeed somewhat distant'

(2228) He horoi whare tana mahi

cls clean house her(sg) work

'Her job is house-cleaning'.

Notice firstly that the forms which follow he in such examples may be nominal, as in (2225), or adjectives, as in (2226) and (2227), or verbal, as in (2228). Notice in the last case the object incorporation which also occurs in contexts which are unquestionably verbal. The indefinite article he, on the other hand, is not usually followed by forms such as those in (2226)-(2228). It thus seems that, as with ko above, it may be necessary to distinguish this he from the indefinite article, although, again as with ko, the evidence is hardly compelling, and the distinction not always easy to make. The he of classifying sentences can perhaps be glossed as "belongs to the class of", "belongs to the category". In this construction, the second constituent functions as the subject, and can be topicalized with ko, e.g.

- (2229) Ko tana mahi he horoi whare
 top. her(sg) work cls clean house
 'Her job is house-cleaning'.

These structures also negate with ēhara, e.g.

- (2230) Ehara tērā i te whare where
 not that at(neut) the house red
 'That is not a red house',

cf.

- (2231) He whare where tērā
 cls house red that
 'That is a red house',

where the negative apparently makes use of an overtly local preposition for class membership. This means that only the assignment of constituents to subject and predicate distinguishes the negations of equative and classifying structures. Thus

- (2232) Ehara te tamaiti i a Tamahae
 not the child at(neut) pers Tamahae
 'The child isn't Tamahae'
 (2233) Ehara a Tamahae i te tamaiti
 not pers Tamahae at(neut) the child
 'Tamahae is not a child'.

In each case, the second constituent, or subject, is Raised in the negative.

(2233) causes a further problem, however. As mentioned in 2.2.3.1, te is used generically to refer to a class of entities, but in this use occurs with the plural form of those nouns which have two forms, like tamaiti. However, in (2233), where te tamaiti appears to refer to the entire class, tamariki was rejected. I have no explanation to offer for this.

2.4.5.3 Prepositional Structures

There is a good deal of doubt as to whether this group is in fact a homogeneous class, but as evidence to the contrary is not compelling, and the groups share the same formal description, they are treated together here. They all have the structure

[prep + NP] [NP], e.g.

(2234) Nō Pōneke au

belong Wellington I

'I am from Wellington'

(2235) I te kura au

at(past) the school I

'I was at school'

(2236) A te Tūrei te hui

at(fut) the Tuesday the meeting

'The meeting is on Tuesday'

(2237) Hei mōunu tāku wāhanga

for bait my(sg) share

'My share is to be for bait'.

In examples involving complex prepositions, only part of the complex prepositional phrase need be in first position. Complex prepositions have the structure

prep + local noun + prep

e.g. i runga i
at the top at,

and thus we find

(2238) I runga i te tēpu ngā pukapuka

at(past) the top at(adnom) the table the(pl) book

'The books were on the table'

and

- (2239) I runga ngā pukapuka i te tēpu
 at(past) the top the(pl) book at(adnom) the table
 'The books were on the table'.

The choice between them is determined by which NP it is desired to give prominence to.

The second constituent in such sentences is the subject, and can be fronted with ko, e.g.

- (2240) Ko ngā pukapuka i runga i te tēpu
 top. the(pl) book at(past) the top at(adnom) the table
 'The books were on the table'

- (2241) Ko ētahi o ngā tāngata, nō Te Kaha
 top. some(pl) of the(pl) people belong Te Kaha
 'Some of the people belonged to Te Kaha'

- (2242) Ko au i te ihu
 top. I at(past) the nose
 'I was in the prow'.

The negations of these prepositional sentences are not homogeneous. Thus (2234) negates with ēhara:

- (2243) Ehara au nō Pōneke
 not I belong Wellington
 'I don't belong to Wellington',

but (2235) and (2236) negate with kāore, e.g.

- (2244) Kāore au i te kura
 not I at(past) the school
 'I wasn't at school'.

A request for the negation of (2237) caused some difficulty, although

it appeared that ēhara was preferred to kāore. Previous grammars (e.g. Williams, 1862, 31; Biggs, 1969, 75-76) suggest that the preposition determines the negator: that ēhara is used with nā, nō etc., while kāore is used with locative prepositions. This suggests that the category of prepositional structures could be subclassified according to the required negator. It is not clear, however, that this would have any further use.

One further point must be noted: topicalizing ko is restricted to occurring with definite NPs, and normally only definite NPs can be fronted. The following example, however, has an indefinite NP fronted without any further marking:

- (2245) I ngā rā o mua he wheketere i
 at(past) the(pl) day of before a factory at(neut)
 runga i tēnei moutere
 the top at(adnom) this island
 'Formerly, there was a factory on this island'.

It is not clear how restricted this fronting is, but it seems to occur most commonly with such prepositional structures.

2.4.6 Ko-fronting

A good deal of information about ko-fronting has been scattered through various sections, and it seems useful to draw the information together in one place, for convenience of reference. If the distinction suggested in 2.4.5.1 is upheld, then the ko that is the concern of this section has as its function the topicalizing of definite subject NPs of both verbal and non-verbal sentences, e.g.

- (2246) Ko Rewi kei te oma ki te whare mTraka
 top. Rewi at(pres) the run to the house milk
 'It is Rewi who is running to the milking shed',

derived from

(2247) Kei te oma a Rewi ki te whare mTraka
at(pres) the run pers Rewi to the house milk
'Rewi is running to the milking shed';

(2248) Ko ngā whurutu o te toa rā, he tino reka
top. the(pl) fruit of the store there cls very sweet
'The fruit from that store is very nice',

derived from

(2249) He tino reka ngā whurutu o te toa rā
cls very sweet the(pl) fruit of the store there
'The fruit from that store is very nice'.

The fact that ko can front only definite NPs is shown by the ungrammaticality of

(2250) *Ko he tamaiti i oma ki te whare mTraka
top. a child past run to the house milk
'It was a child who ran to the milking shed'

(2251) *Ko tētahi tamaiti i oma ki te whare mTraka
top. a certain child past run to the house milk
'It was a child who ran to the milking shed'.

The fact that ko fronts only subjects will be demonstrated in some detail in Chapter 4; it is not, however, a matter of controversy: Hohepa, for example remarks (1969b, 9)

In sentence initial position, subject phrase is obligatorily initiated by the noun specifier /ko/,

and (1969b, 9-10):

Given these scrambling possibilities of subject phrase there is a theoretical justification for postulating that subject is a marked category (marked by /ko/) and this formal marker is deleted in other than sentence initial position.

While I do not believe that the analysis proposed here is helpful, it nevertheless emphasizes the association of ko with subject.

Biggs also says (1969, 101)

Emphasis may be placed on the subject of a sentence by moving it to the beginning and preposing the focus particle ko.

One possible exception to this will be raised in 4.4.8, but there is no reason to challenge the validity of the association of ko and subject. It must also be mentioned that Chung (1977, 362) claims that notional Direct Objects can also be fronted with ko, leaving behind ai to the right of the verb. Whether this is the same focusing construction remains in doubt.

More interesting, however, is the question of the semantic interpretation of ko-fronted sentences. Terms like "emphasis", and "focus" are too vague to be of much assistance. However, there are certain characteristics associated with the construction which suggest that a more accurate understanding of its function might be achieved.

It will be useful here to consider its function in the light of Chafe's article (1976), which attempts to unravel some of the threads involved in notions like "emphasis". It will be instructive to consider the relation between ko and each of the six "statuses" discussed by Chafe. The first of these is givenness, which Chafe defines thus (1976, 30):

Given (or old) information is that knowledge which the speaker assumes to be in the consciousness of the addressee at the time of the utterance. So-called new information is what the speaker assumes he is introducing into the addressee's consciousness by what he says.

Ko does not appear to be associated exclusively with either given

or new information. Thus in

- (2252) ... Ka karanga au "Pāhi!" Ko tēnei kupu i tangohia
 unspec call I pass top. this word past take-pass.
 mai i te reo Ingarihi, arā, "Pass!"
 hither from the language English i.e. pass
 'I shouted "Pāhi!" This word has been borrowed from the
 English language, i.e. pass'.

tēnei kupu refers to "pāhi", which has just been given. Examples where topicalizing ko is associated with new information are not particularly common, but the following seems to be a case in point. The preceding text translates as follows: "Listening to story-telling is one of the favourite activities of Maori children. Formerly, when the meal was over, the children would go to the fireside, and sit and wait for the story-teller. The Maori had no writing before the coming of the Pakeha." Then:

- (2253) Ko tōna mātauranga, i heke iho i ngā
 top. his(sg) knowledge past descend down from the(pl)
 ngutu o ngā kaikōrero i tētahi whakatupuranga
 lip of the(pl) ag-speak from a certain cause-grow-nom
 ki tētahi whakatupuranga
 to a certain cause-grow-nom
 'His knowledge was passed down by the lips of the orators
 from one generation to another'.

It seems fair to claim that 'Maori knowledge/learning/wisdom' is being introduced here as new; it has certainly not been mentioned before, and can hardly be inferred from the mention of writing. It thus appears that ko is not associated solely with given information.

The second function discussed by Chafe is contrastiveness.

This he characterizes (1976, 33-35) as the selection of the correct candidate from a limited set of possible candidates in relation to a certain act or state or event. Ko is not necessarily contrastive in this sense. Consider the following from the legend of Rona:

- (2254) I tētahi pō atarau, ka haere a
 at(past) a certain night clear unspec move pers
 Rona ki te tiki wai mō ana tamariki,
 Rona to the fetch water for her(pl) children
 ko te kete ki tētahi ringa mau ai, ko
 top. the kit to a certain hand carry pro top.
 te tahā ki tētahi ringa
 the calabash to a certain hand
 'One moonlight night, Rona went to fetch water for
 her children with a kit in one hand and a calabash
 in the other'.

Neither te kete nor te tahā is contrastive in Chafe's sense here. However, in the discourse where the following occurred,

- (2255) Ka whakahoki a Rewi i te pukapuka.
 unspec cause-return pers Rewi prep the book
 Kāore ko Mere ka whakahoki i te pukapuka.
 not top. Mere unspec cause-return prep the book
 'Rewi returned the book. It wasn't Mere who
 returned the book',

the ko-phrase does appear to be contrastive. Chafe also mentions (1976, 37) that cleft sentences are often used in English to express contrastiveness. Maori informants presented with a

list of informationally marked English translations of ko-sentences consistently chose an English cleft translation as the nearest equivalent. This is also noted in Clark, 1976, 37.

The third function discussed by Chafe is definiteness. Ko is always associated with this feature. Fourthly, Chafe discusses the function of subject, and again, ko is always associated with this function. Chafe characterizes this function as (p.43-44) the starting-point of the communication, about which new information is provided. Finally, Chafe discusses topic, and suggests that the term topic in English is usually used of situations where contrastiveness is involved, whereas in Chinese, for instance, NPs called topics are scene-setters (1976, 50):

Typically, it would seem, the topic sets a spatial, temporal or individual framework within which the main predication holds.

Certainly ko is not associated with topic in this second sense.

It thus appears that, while one of the common functions of ko is to mark contrastiveness, none of the statuses discussed by Chafe coincides with the function of ko. In 4.1.11, it will be shown that Halliday's suggestions, while partially useful, also leave much unaccounted for. Once again, since the matter is not relevant to the central concerns of this work, no further attempt will be made to explore the issues raised by ko structures. However, it is obvious that there is room for a good deal of research in this area in Maori. Ko is glossed 'top(ic)' in this work, because of the association of this with contrastiveness. However, it should be borne in

mind that this gloss does not seem to be semantically appropriate in all the instances in which it is used.

2.4.7 The Passive

The status of the passive in Maori has been much discussed in recent literature. The question that has been raised is essentially one concerning the relation between the active and the passive: which of these is basic? The question is related to a wider controversy in Polynesian linguistics, the ergative-accusative debate. Some Polynesian languages, such as Samoan and Tongan, have what appears to be ergative morphology: the subject of the intransitive is \emptyset -marked; the agent of the transitive is e-marked (a preposition cognate with the e found in Maori passives), and the notional direct object is \emptyset -marked. The question of whether, in the history of the Polynesian language family, those languages apparently having accusative morphology are an earlier or later development is still a matter of debate. It is not my concern here to become involved in these wider issues. However, one of the aims of Chapter 4 is to discuss some evidence from the syntax of Maori which might settle the arguments as to the synchronic nature of grammatical relations in Maori. It is thus necessary here to outline the nature of the ergative-accusative debate as it concerns modern Maori.

Firstly, the morphology of the passive in Maori has been discussed in some detail in 2.3.8, where it was shown that there might be a case for regarding neither the active nor the passive form of the verb as the base form. However, the evidence for doing this in a synchronic description of Maori was argued

to be non-compelling. Synchronically, then, it seems most appropriate to regard the active as morphologically basic, and the passive form as morphologically derived.

But the argument extends further than the morphology, and appears also to stem from Hohepa's (1967) treatment of the passive. He derived the active and the passive separately in the base rules, rather than transformationally. The relevant rule is his Rule 5 (1967, 100):

$$5. VP \rightarrow \text{Prev} \left\{ \begin{array}{l} V_i (\underline{i} + NP) \\ (faka_) M (_tia (\underline{e} + NP)) \end{array} \right\} (\text{Adv})$$

The second line of this rule will either give M, which is an active form verb, or M_{tia}, which is a passive form verb.

Hohepa provided no discussion of the assumptions underlying the rules, nor their justification.

Hale, in his review of Hohepa (1967), rejects the "base structure" derivation, as he calls Hohepa's, and argues for the transformational derivation, while at the same time endeavouring to understand why Hohepa should have chosen the former, discussing the imperative and pronominalization in embeddings with kia and ki te. Hale concludes that pronominalization in Maori precedes passivization and points out that this ordering is unusual in the languages of the world, and not found consistently even in the closely related Polynesian family. This led him to make tentative proposals (1968, 98) that Maori might be moving towards an ergative structure. He concludes that "Maori is not yet an ergative language" (1968, 98), and that Hohepa's treatment of the passive is therefore anticipatory, rather than defensible from the viewpoint of modern Maori.

Hohepa's paper "The Accusative-to-Ergative Drift in Polynesian Languages" appeared in 1969, and in this he argues independently for the correctness of Hale's conclusions. This has since been referred to as the Hohepa-Hale hypothesis (Hale had proposed a similar development for Australian languages). Essentially this hypothesis proposes that all Polynesian languages had an active and a passive related as in English (and Maori). However, there is a tendency to favour the passive (in Maori, the passive is claimed to be more frequent, although I have not seen figures or details of the material used for any such count other than those in Clark (1973), a very small sample), which in Samoan and Tongan has led to the loss of the active pattern for the majority of verbs, and thus to the passive suffix becoming optional.

Clark (1976) raised some problems with this hypothesis, and proposed the alternative: that Proto-Polynesian was ergative, and that accusative patterns such as those found in modern Maori are newer. In particular, Clark attacks Hale's suggestions about the crucial ordering of pronominalization and passive (1976, 69-70). Clark takes the existence of me which has a verb lacking in passive morphology but the e passive agent preposition as an indication of former ergative structure in Maori (1976, 76). Clark objects to Hohepa's notion of "drift", and sees the chief merit of his own proposal as being that it does not require that drift in the same direction took place independently in several Polynesian languages without adequate cause in the language structure itself.

Sandra Chung's Ph.D. thesis, revised and published as Chung (1978) can be read as a refutation of both Hohepa-Hale's and Clark's proposals, although she argues that the Hohepa-Hale conclusion was

correct, but its motivation wrong. Thus she claims that Polynesian languages were accusative, and that ergative patterns are a more recent development. This appears to be the current state of the accusative-ergative debate in Polynesian (although these scholars are by no means the only contributors). Because of the centrality of the passive to the argument, a variety of interesting information about the Maori passive has come to light in the course of the discussion.

Firstly, Clark's 1973 conference paper must be considered. Clark notes that morphologically the active and passive in Maori appear to be related as they are in English. He lists a number of factors which, however, make the passive seem strange (1973, 2): its appearance in the imperative of transitive verbs, its commonness in narrative, and certain facts relating to NP deletions. Clark produces additional data to show that Hale's remarks on the order of passive and pronominalization are incorrect, and that therefore some other explanation of the "strangeness" of the Maori passive must be sought. Clark notes the following characteristics (1973, 9ff): the passive always occurs if the agent is unspecified; relativization preferably deletes the subject (i.e. the choice of an active or passive in a relative clause is determined so that where possible the coreferential NP functions as subject); reflexives are active (but see 4.1.3); ki te complements are active; he then proposes more controversially that aspect determines the active-passive choice: "passives are completive or perfective; actives are incomplete, imperfective or hypothetical" (1973, 10).

Chung and Timberlake evidently replied to Clark at the next LSA meeting, but were unable to provide me with a copy of their

paper. However, Chung argues for a different explanation of the active-passive distribution in her thesis (1978, 66ff). At the same time, she argues against Sinclair's proposals (1976) that morphological passives are basic transitive structures. She argues that the frequency of the passive in Maori is not a guide to its grammatical relations, and points out that while there are a number of rules which demand the active (such as ki te complementation) the passive is not required by other rules, except perhaps imperativization. Thus she point out (1978, 70) that a high proportion of passives occurs in clauses which have not undergone other rules. She then discusses relativization and the distribution of he, and concludes that this data points to grammatical relations in the passive being similar to those in English. (Her data on relativization is misleading in certain respects (see 4.3), but the conclusion is valid with both her data and mine.) She thus rejects the idea that passives are not derived from actives. Turning to Clark's suggestion of an association between passive and perfective, she adduces examples (from the same data base as that used by Clark) which have the passive in imperfective clauses (1978, 77), and points out (1978, 78) that the passive is not necessarily found in perfective clauses with experience verbs (her 'middle verbs'). She then proposes an alternative explanation (1978, 78-80), pointing out that in the clause types where passive is most likely, the direct objects are more completely affected by the event, and suggests that the Maori passive may be subject to the following condition:

Apply passive to clauses containing an affected direct object

(1978, 80), a condition which might be motivated further by a

condition (1978, 81)

Other things being equal, affected NPs ... appear as surface subjects.

The discussion in this work in 4.1 considers a wider range of evidence and uses a different data base from Clark and Chung; in particular, it uses more modern texts than their studies. However the conclusions concerning the grammatical relations of the Maori passive are in line with theirs. The further issue of an association with perfectivity or affected objects is not discussed here.

Sinclair's article (1976) contains so many errors, both in the Maori data and in interpretation of linguistic argument, that it hardly deserves serious comment, except that it appeared in JPS. Chung's refutation of it (Chung, 1977) was therefore necessary, and both must receive some attention here. Sinclair sets out to demonstrate that Maori is an ergative language, using some of Keenan's "subject of" properties. (This is also the procedure followed here in 4.1, but the opposite conclusion to that reached by Sinclair is reached here.) Amongst the data misrepresented by Sinclair is the status of actives such as

(2256) I patu a Rewi i a Hone (his (12))
 past beat pers Rewi prep pers Hone
 'Rewi beat John',

to which he assigns a ?. As will be seen from the discussion by Clark and Chung, this doubt is a function of the tense (i) or the type of DO, or both; there is no doubt as to the normality of or the grammaticality of

(2257) Kei te patu a Rewi i a Hone
 at(pres) the beat pers Rewi prep pers Hone
 'Rewi is beating John'.

Sinclair appears to suggest that the actor-emphatic is the "normal" topicalization of (2256), i.e.

- (2258) Nā Rewi i patu a Hone
by Rewi past beat pers John
'Rewi beat John',

but this does not correspond to (2256) as

- (2259) Ko Rewi kei te patu i a Hone
top. Rewi at(pres) the beat prep pers John
'It is Rewi who is beating John'

does to (2257). Thus Sinclair's claims about topicalization are unjustified. His claims about relativization (1976, 13-14) are similarly based on insufficient data. Sinclair claims that (2256) would be derived by "anti-passive" from

- (2260) I patua a Hone e Rewi
past beat-pass. pers John by Rewi
'John was beaten by Rewi',

and that (2256) is therefore unnatural, but used to feed other rules.

Chung argues that the three claims Sinclair makes for the superiority of his proposal are unjustified. He claims that it accounts for the form of the verb in imperatives, which she counters with the claim that he will have to have a condition to state that Antipassive cannot apply, while the accusative hypothesis has to have a condition that passive must apply, and that the two are thus equal. She rejects his claim that to have reduced the ambiguity of i (it no longer marks DO) is an important improvement, and points out that equally general statements of the distribution of i are possible if it is taken as the least marked preposition (a position reminiscent of Johansen's in 1948). She also rejects the

idea that frequency is necessarily linked to grammatical unmarkedness, and thus claims that the third "advantage" of Sinclair's proposals is not significant. She then discusses facts about the distribution of he, ko-clefting, and ki te complementation which argue that (2260) is intransitive, and (2256) transitive, contrary to Sinclair's proposal. In particular, he by Sinclair's proposals should occur in the (derived) subjects of (intransitive) antipassives, but doesn't; similarly, ko-clefting has a strange distribution under his proposal, as have the controllers of ki te Equi NP deletion. From the similarity of the problems raised by his proposal for each of these constructions, she argues (1977, 366) that a generalization is being missed: that Maori is accusative, not ergative.

It is hoped that, from this discussion, the necessity of not taking for granted the derived nature of the passive in Maori will be clear; but at the same time, it must be pointed out that the weight of scholarly opinion falls heavily on the side of regarding it as a derived construction - which is also concluded here.

2.4.8 The Actor-Emphatic

Perhaps the most curious thing about the actor-emphatic (or agent-emphatic, as it is sometimes called) is the lack of interest it has engendered until quite recently. Its existence is well-documented, but its strange character was not remarked upon. The construction is illustrated by

(2261) Nā Hata i whakahaere te kanikani
 by Hata past cause-move the dance
 'Hata ran the dance'

(2262) Mā Pani e horoi te whare

by Pani non-pt clean the house

'Pani will clean the house'

(2263) I ēnei rā, mā te mihīni e mahi te nuinga

at(neut) these day by the machine non-pt work the majority

o ngā mahi

of the(pl) work

'These days, machines do most of the work'.

Attention must be drawn to three features of the construction. Firstly, there is strict co-occurrence between mā ... e and nā ... i. Secondly, the verb in this construction is always active in form. Thirdly, the noun phrase expressing the notional direct object (which in unmarked position follows the verb as above, but can precede it) has no case-marking preposition.

The construction appears to be limited to canonical transitive verbs, i.e. those with indubitable direct objects. As mentioned in 2.3.7, it does not occur with experience verbs, and is therefore one diagnostic test for this class. Neither does it occur with stative verbs. A little doubt hangs over its occurrence with intransitives. Biggs (1969, 73) gives an example of this, but it was questioned by my informant, and I have found none in texts.

Maunsell (1942, 79 and 149) criticizes those who claim that nā and mā mean 'by'; he argues that they are possessives, and should be glossed, e.g. 'It was Hata's [I mean] the running (of) the dance', and accompanies this with a criticism of those who say that the verbs, though active in form are passive in meaning. He writes (1842, 149):

Those who attend to the genius of the language ... will, we think,

find but little difficulty in the question. They will see that there are no participles, adverbs, or relative pronouns in Maori, and that, therefore, we must not be surprised at a construction which, though loose, is admirably adapted to supply the defect.

However, there appears to be no evidence that this is a "loose" construction (whatever that is) from the point of view of Maori.

Williams (1862, 42) has this to say of the "agent-emphatic":

When special emphasis is to be laid on the agent an irregular construction is used, the preposition nā being placed before the subject for past time, and mā for future. In sentences of this kind, the subject, being the most emphatic member of the sentence, stands first, and the object either before or after the verb, but without any transitive preposition, the verb being in the active.

This description of the construction is entirely accurate, as far as surface features go, and it is the position adopted by the vast majority of scholars, with some minor modifications. The lack of "transitive preposition" was seen merely as an irregularity of the construction, and it apparently excited no further curiosity.

The first new development came with Biggs (1969, 73-74), where he associates such sentences semantically with ko-fronting. However, more importantly, he identifies the NP which follows the verb in the examples given above as the subject (1969, 73):

In this construction, the actor is the focus constituent of the sentence, and that which is acted upon is the subject.

He does not, however, comment on the form of the verb. He also regards the following example (1969, 74)

(2264) Nōna e tThore ana i te tia, ka pakū
 by-he pro- skin -gress prep the deer unspec go off
 te pū a Motu
 the gun of Motu
 'While he was skinning the deer, Motu's gun went off'

as a further instance of the construction, with dependency between nō and e ... ana. He adds that it was not found in older texts, but describes it as "common in contemporary spoken Maori". His discussion of the construction must be considered (1969, 74):

First, it should be noted that it always forms a dependent sentence within a sentence. Second, it should be noted that, unlike the future and past agent emphatic, the goal of the verbal phrase in the continuous agent emphatic is introduced by i.

This, it seems to me, brings into serious doubt the similarity of this and the construction with mā/nā: they occur freely as main clauses, and the marking of the second NP with i is that expected from the form of the verb, but not with the others. Note that Biggs calls this NP the "goal" in the nō construction, but the corresponding NP he calls "subject" in the mā/nā construction. Accordingly, the construction illustrated in (2264) will not be included here: it does not pose the same problems for grammatical description as the mā/nā construction.

It appears, however, that Biggs may have changed his mind about the agent-emphatic construction, since he writes (1974, 406):

With the possible exception of the actor-emphatic construction, which will not be discussed here, all subjects in Maori are in the unmarked nominative case.

(He refers, however, in a footnote, to his 1969 treatment of the construction.)

Given his failure in the 1974 article to distinguish logical, grammatical and psychological subject, it is not absolutely clear what kind of subject he had in mind in the above quotation, but it appears likely, from his criticisms of others, that he intended "grammatical subject". Unless he has in mind only the actor-emphatic with nō, this represents a reversal of his 1969 position.

Clark (1976) devotes a chapter of his historical-comparative thesis

to the construction, introducing the formal characteristics thus (1976, 112):

The subject appears before the verb, preceded by nā or mā ...
 The object of the verb appears without the accusative marker
i ...

He points out that the absence of i is problematic synchronically, and suggests (1976, 112) that it might be the case that

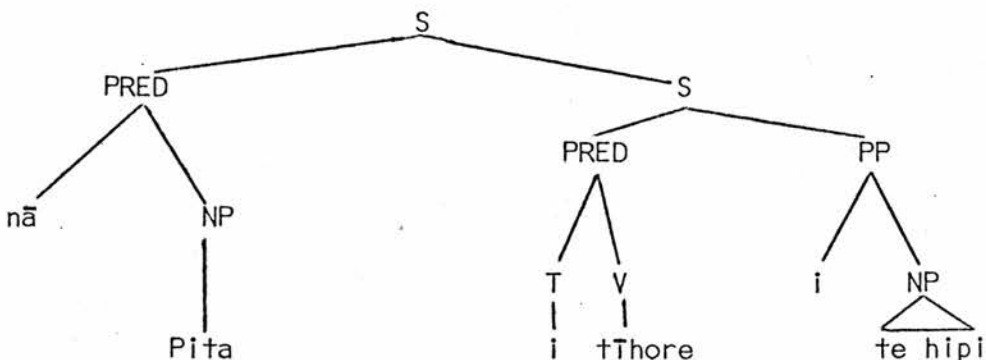
the object phrase, once the subject has been removed, is zero-marked on the basis of some general principle - because it is the first NP following the verb, or the only remaining argument, for example.

However, he rejects this, since with ko-fronting, no similar change in marking occurs. He is in doubt whether the unmarked NP "is in fact the subject of the verb" (1976, 112). Clark suggests how the construction might have arisen historically, either from a construction where in (2261), for example,

Nā Hata i whakahaere

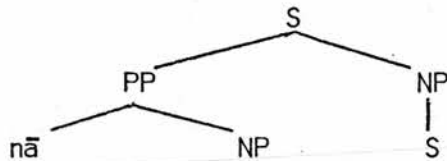
by Hata past cause-move

was a complex predicate involving a genitive, and te kanikani the subject (1976, 119), or from a construction in which the complex predicate involved a relative construction (1976, 121). However, he claims that there has been reanalysis, so that such structures are derived from basic structures by nā-fronting and predicate formation to give a structure (1976, 122):



for Nā Pita i tThore te hipi, 'Peter skinned the sheep'. However, as he points out, the lack of i marker, and the restriction of the construction to transitive verbs, remain anomalous under this reanalysis.

This is essentially the kind of analysis proposed by Sandra Chung (1978, 175ff). She proposes the structure



noting that the nā NP "corresponds to the subject of the embedded clause ..." (1978, 176). As evidence, she draws attention to the fact that such sentences negate with ēhara, and not kāore, and non-verbal sentences of the prepositional kind negate with ēhara (see above 2.4.5.3) if the preposition is one of the possessives. Secondly, she points out that the tense marker e occurs (in modern Maori) chiefly in embedded clauses, thus suggesting that the verb in this construction is in an embedded clause. She takes no stand on the derivation of this construction. However, she proceeds to argue that the underlying DO is promoted to Su in the embedded clause. As evidence (1978, 178), she points to the lack of marking, to the relativization strategy (see 4.2.16), to ko-fronting, to he distribution, and to Raising (1978, 179). In certain respects, the data I have collected or elicited is in conflict with hers, however. The construction will be discussed in detail in 4.2, and further questions concerning the grammatical relations in the construction will be raised there.

2.4.9 Some Remarks on Information Structure

It will be clear from the discussion of the marked order structures

ko-fronting and the actor-emphatic that sentence initial position is of considerable importance in Maori in the distribution of information. However, it has also been stated that Heavy NP Shift, for instance, moves NPs to sentence final position. In addition, it is quite common to hear claims that the verb has special communicative importance in Maori because it comes first, although I cannot think of anyone who has made this claim in print. The issues involved deserve at least brief consideration for the light they shed on some of the attempts that have been made in the linguistic literature to provide a theoretical framework for the analysis of information distribution. Probably the most sustained attempt to account for this aspect of language patterning is that of the Prague School, where Firbas has a considerable output relating to information structure, and many others have also contributed to the development of the theory.

The Prague School theory may be outlined very briefly as follows. Constituents of a sentence will vary in their importance to the message conveyed by the sentence. Those which provide a lot of new information, or advance the communication significantly, are said to have high "communicative dynamism" (CD), while those which serve to link the sentence to the context have comparatively low CD. The Prague School theory (e.g. Firbas, 1959, 42ff) assumes that there are three basic degrees of communicative dynamism, which they call "theme", "transition", and "rheme", which are assumed to occur most naturally in that linear order (see e.g. Firbas, 1975, 317-318). Thus they postulate that, other things being equal, constituents low in CD will precede constituents high in CD. The distribution of information is called "Functional Sentence Perspective" (FSP), and the following quotation shows that

the theory is intended to be universal in its application (Firbas, 1959, 41):

... we believe FSP to be one of the most essential constituents of language. For how could language function as an efficient instrument of thought and communication if it were not in a position to secure - at least to some degree - a reliable appreciation of the distribution of communicative dynamism ...?

Now, from the fact that Heavy NP Shift moves constituents to sentence final position in Maori, it seems reasonable to conclude that the RH end of the sentence is the rhematic end. It is the position in which the DO normally occurs, and DOs tend to have high CD. Adverbs which do not merely provide a setting also tend to occur in sentence final position. This seems uncontroversial, and would lead to the expectation that the middle of the sentence would be transitional in CD. However, in an unmarked order, three-part, Maori sentence, the middle position is occupied by the subject, which most often conveys in Maori, as in other languages, information which is known or contextually given, and therefore thematic. And initial sentence position, occupied by the verb, is much less likely to contain thematic material. An interpretation under which Maori verbs are thematic can certainly not be reconciled with criteria given for thematicity in, e.g. Firbas, 1975. It therefore seems unlikely that unmarked Maori sentences show a gradation of CD of the kind required by Prague School theory.

In addition, information distribution in marked sentence types such as ko-fronting and the actor-emphatic provides problems for the theory. Ko-fronting is associated with definiteness, with subjects, and with givenness on some occasions (see 2.4.6), but not always. In cases where it is, ko-fronting could be seen as a device to match linear order with gradation of CD from low to high, by putting the thematic element first. However, ko-fronting can also be associated with contrastiveness,

and contrastive elements are rhematic, so that the function of ko-fronting is not consistent with respect to information distribution. The actor-emphatic construction also has the function of placing the NP which would be the subject in the unmarked construction in front position. However, the use of the actor-emphatic seems never to be associated with low CD subjects, but rather serves to rhematize subjects. It might in fact be argued that it produces the order rheme-transition-theme, although it is not essential for this construction that the notional DO should have low CD. Thus it can be seen that front position in Maori can be associated with either rhematic or thematic elements, and - in unmarked structures - probably also with transitional elements. It would thus seem that Maori poses very serious problems for the kind of approach to information structure taken by the Prague School. Linearity itself would not appear to be an important principle in relation to the distribution of information.

Dik (1978) discusses constituent ordering from a very different viewpoint, and it seems that his observations provide a rather more useful way of regarding the various orderings possible for Maori. He claims (1978, 174) that there are three ordering principles, which are in tension: a tendency to use the same position always for the same function; a preference for certain pragmatic functions to appear in particular positions; and a left to right ordering of complexity. He proposes a language independent order of constituents (1978, 175) of which the central core is

$$P_1 (V) S (V) O (V),$$

which in Maori is realized as $P_1 V S O$. P_1 is a special position, which he claims (1978, 178) is used in all languages, although not necessarily

in the same way. He notes that in VSO languages, rules which put Subjects into position P_1 are common, and that this can result in a change to SVO orderings in the long term. Maori certainly does this in ko-fronting and the actor-emphatic. One of the chief functions of P_1 in Maori appears to be that it gives prominence to an NP.

2.5 Complex Sentence Structures

The majority of complex structures in Maori are treated in some detail in Chapter 4, and the necessary information will be presented there. This includes sentential complements and relative clause structures. One major area of complex structures is not, however, a central concern of this work, namely sentential adverbial structures. These have received remarkably little attention in the literature published to date; even Reedy, in his thesis "Complex Sentences in Maori" (Reedy, 1979) has nothing to say about them specifically. However, there is much to suggest that a detailed description of them would provide a good deal of insight into at least one problem of Maori grammar, the function of the particle ai. A detailed examination of the area is well outside the scope of the present discussion, but the following exemplification of some of the major types of sentential adverbial structure should give an idea of the complexity of the area, and the problems it raises.

2.5.1 Ki te adverbials

These are apparently subject to the same complex restrictions on their formation as ki te complements, discussed in 4.1.6. Formally, they appear to be indistinguishable from ki te complements, but tend to have different prosodic characteristics. Semantically, they are most

often adverbials of purpose, e.g.

- (2265) I noho kē rāua ki te āwhina i ngā kaimahi
 past stay instead they(2) to the help prep the(pl) ag-work
 ki te whakareri i te hākari
 to the cause-ready prep the feast

'They stayed instead to help the workers to prepare the feast'.

Only the first of these (ki te āwhina i ngā kaimahi) is clearly adverbial, but it seems unlikely that a clear division into adverbial and complement types can be achieved.

2.5.2 Kia adverbials

These appear to be formally indistinguishable from kia complements, although careful examination might bring to light different deletion rules. It is probably necessary to distinguish two types, at least, of kia adverbials, since those that are semantically resultative require ai in the adverbial clause, but there are others which express a variety of dependent relations which do not require ai. Examples of those without ai are:

- (2266) Kia pau ngā moni, he kino te noho
 let be exhausted the(pl) money cls bad the stay
 'When the money's gone, it's bad to stay there'
- (2267) I ngā rā o mua kia tae, katoa mai
 at(past) the(pl) day of before let be arrive all hither
 ngā whanaunga ki te poroporoaki, kātahi anō ka
 the(pl) relative to the farewell then yet unspec
 tāpuketia te tūpāpaku
 bury-pass. the body
 'In former times, the body was not buried until all the
 relatives had arrived to farewell [it]'.

Resultative examples involving ai are

(2268) Huakina te hāngī, kia kai ai ngā tāngata
 open-pass. the hangī so that eat pro the(pl) people
 'Open the hangī so that the people can eat'

(2269) Pokokohua koe, e te marama, tē puta mai koe
 swine you(sg) voc the moon not appear hither you(sg)
 kia mārama ai
 so that light pro
 'You swine, moon, for not appearing so that it will be light'.

2.5.3 Hei adverbials

The semantics associated with these adverbials seems to overlap to some extent with kī te, i.e. they often express purpose and related notions. However, the rules governing the well-formedness of hei adverbials are different from those governing kī te. It is not entirely clear, yet again, whether hei structures function only as adverbials, or whether they also appear as complements. Consider

(2270) Ko tēnei te taraka hei mau i te kirīmi
 eq this the truck for carry prep the cream
 'This is the truck for taking the cream'

(2271) Ka whakatūria ki roto i te
 unspec cause-stand-pass. to the inside at(adnom) the
 Museum hei tirohanga mā te iwi
 Museum for see-nom. for the tribe
 'It was erected in the Museum as a spectacle for the people'.

2.5.4 Ahako adverbials

In contrast to those discussed so far, ahako does not seem

to pose descriptive problems. It appears to correlate fairly well with English 'although', and can be followed by either verbal or nominal structures, although the latter appear to be commoner, e.g.

- (2272) Ahakoa i āhua ohore tonu ia i te ngaunga
 although past somewhat startle indeed he from the bite-nom.
 mai o te manu rā, kāore i roa, ka kūmea
 hither of the bird there not past long unspec pull-pass.
 mai e ia ki waho
 hither by he to the outside
 'Although he was indeed somewhat startled by the biting
 of the bird, it was not long before it was pulled out
 by him'

- (2273) Ahakoa te kaha o tana mate, kāore ia i
 although the strong of his(sg) illness not he past
 haere ki te hōhipera
 move to the hospital
 'Despite the seriousness of his illness, he didn't go
 to hospital'.

2.5.5 Adverbials with ai

While many adverbials in Maori are phrasal, rather than sentential, and so do not concern us here, ai is used as a marker of subordination in a wide variety of structures both phrasal and sentential. It is not possible to provide any kind of classification here, since the matter requires a great deal of study, but the following examples illustrate the phenomenon.

(2274) Kāore e kore, i purei tāhae a Paki mā
 not non-pt doubt past play false pers Paki and others
 i wini ai i a rāua
 past win pro from pers they(2)

'Without a doubt, Paki and his partner cheated to win'

(2275) Ka mauria rātou ki tētahi tēneti nui moe ai
 unspec take-pass. they(pl) to a certain tent big sleep pro
 'They were taken to a big tent to sleep'.

Sometimes the relationship appears to be co-ordination, rather than subordination, with ai marking which of the two conjuncts depends on the other, e.g.

(2276) Whakamōmonatia ngā poaka, ka patu ai mō te mārena
 cause-fat-pass. the(pl) pig unspec kill pro for the wedding
 'Fatten the pigs and kill them for the wedding'.

Whether such structures are better classified as co-ordinated or adverbial is far from clear. It should perhaps be pointed out that while the first of them is imperative, the second is not.

2.5.6 Final Remarks

No claim to completeness is made for this section. There are other adverbial structures which, like those with ahakoa, seem unproblematic, and if these appear in examples in the following chapters no difficulties should be encountered. In addition, no attempt has been made to indicate the range of phrasal rather than sentential adverbial structures, since many of these are discussed in Chapter 3, and their formal description poses no problems. It is likely that a detailed study of adverbials in Maori would be a worthwhile undertaking,

and would show this section to be extremely crude. It is hoped, nonetheless, that the scant information provided here will be adequate to facilitate the necessary understanding of such adverbial structures as appear incidentally in the examples in subsequent chapters.

3.0.0 Introduction

In this chapter, two different case grammars will be used for the description of the Maori data, firstly a Fillmorean grammar, based on Fillmore (1968) and subsequent modifications, and secondly, an Andersonian grammar, based on Anderson (1971). It will be obvious from the discussion in Chapter 2 that prepositions play a vital role in the structure of Maori. Chomskyan approaches to grammar are unsatisfactory in their handling of prepositional phrases, and case grammar developed, at least in large part, in an attempt to deal more adequately with this area. It is this which motivates the examination of case grammar as a possible model for the description of Maori.

3.0.1 Case Grammar versus Chomsky

There are four major assumptions of Chomskyan grammars which seemed unsatisfactory to Fillmore, and led to the development of case grammar. It is not difficult to show that these provide as many problems for the description of Maori as for other languages.

Firstly, Chomsky assumed that 'subject' would contribute to the semantic interpretation of sentences, since John hit Bill and Bill hit John are not synonymous. However, Fillmore pointed out that 'subject' does not have just one, constant interpretation, but many. Consider the following Maori sentences:

(3001)	I	patu	a	Tamahae	i	te	kau
	past	beat	pers	Tamahae	prep	the	cow
	'Tamahae beat the cow'						

- (3002) Kua rongo a Rewi i a Tamahae
 perf hear pers Rewi prep pers Tamahae
 'Rewi has heard Tamahae'
- (3003) Kua taka te pahi i te tahataha
 perf fall the bus from the bank
 'The bus has fallen down the bank'
- (3004) Ka puta te reo o tērā i te rangi
 unspec appear the voice of that from the sky
 'Then that voice came from the sky'
- (3005) I tīmata mai te pepa i te rākau
 past start hither the paper at(neut) the tree
 'The paper started life as trees'
- (3006) KT tonu te puare i te haupapa
 full indeed the hole from the ice
 'The hole is full of ice'.

In (3001), the Ø-marked NP, a Tamahae, is an actor or agent, involved causally in the action of his own volition. In (3002), however, the corresponding NP, a Rewi, is not necessarily voluntarily involved, and nor is the action under his causal control. In (3003), the NP te pahi does not express an entity with a will, and thus the action could not have been voluntary. Because the natural interpretation is that the event is an accident, it is unlikely to have been voluntary, even if the subject was animate. It is also possible that te pahi was not the direct cause of the action. It is appropriate to say "Something happened to the bus". (3001-3), then, show that a subject NP involved actively may nevertheless show a range of different types of involvement in the action.

(3004) shows yet another difference in the degree of control of the NP te reo o tērā. Voices are instruments, under the control of (usually) animate beings. The NP in (3004) differs, however, from the NP in (3003), in that 'happen' is not appropriate. It is questionable whether 'do' is appropriate, either. In (3005), te pepa is in a state rather than involved in an action of any kind, although it is a former state from which change is implied. (3006) exemplifies a state where no change is involved for te puare. The examples given are only indicative of the range of interpretations of 'subject' which are found. It thus follows that the input to the semantic component must contain information about these NPs other than that they function as 'subject' to provide a correct interpretation of these sentences. Indeed, Fillmore argued that 'subject' was a surface structure category, and not itself relevant to the semantic interpretation.

Secondly, the subject-predicate division was challenged as a 'deep structure' linguistic concept. In a VSO language like Maori, the predicate is discontinuous in surface structure. Hohepa (1967), using an essentially Aspects framework, was forced to choose the marked order VOS for his base rules for Maori in order to fit it to the Chomskyan $S \rightarrow NP VP$ deep structure hypothesis. The postulation of the predicate also involves the idea that the object is "closer" to the verb in some way than other constituents of the sentence, but there seems little reason to postulate for Maori that i and ki direct object phrases are "closer" to V than other structurally similar phrases, or that the i phrases in (3001) and (3002) above are closer to V than those in (3003-6) - none

of them occurs in juxtaposition with the V. The main evidence for the subject-predicate division in English derives from conjunction and subsequent pronominalization, but such evidence is not found in Maori, where there are no verbal proforms, and either subject or object may be deleted under co-reference (for further details see 4.1.4). Høhepa argues elsewhere (1970, 10-11) that, since NPs like i te kau in (3001) and i a Tamahae in (3002) cannot precede the verb while the \emptyset -marked NPs can, i-marked NPs are dominated by VP. This does not seem to me a necessary conclusion. For instance, if Dik's proposals about word order outlined in 2.4.9 are correct, then the explanation might be that P_1 in Maori is only available to subjects, without further implications about constituent structure.

Thirdly, related to the second point, the subject NP is assumed to have a "higher" status than any other NP in the sentence. This is usually linked to notions that the subject is indispensable. The argument is thus that (3007) is less incomplete than (3008):

- | | |
|--------|--------------------------|
| (3007) | Kua patu a Hone |
| | perf beat pers John |
| | 'John has beaten' |
| (3008) | Kua patu i a Bill |
| | perf beat prep pers Bill |
| | 'Has beaten Bill'. |

Both, however, are attested in discourse in Maori, (3008) more frequently than (3007), because the subject tends to be given contextually, and can therefore be omitted. Arguments of this kind are difficult to assess. The contrasting point of view,

that all NPs are essentially equal, is supported by semantic arguments: for example, for an act of hitting to take place, a hitter and a hittee are both required, even though linguistically it can happen that only one is overtly expressed. Such arguments are, of course, cross-linguistically valid.

Fourthly, it was pointed out that Chomsky's treatment of adverbials was very offhand, in that it was impossible to decide which should be under VP and which under S. The whole treatment of prepositional phrases and adverbial types was unsatisfactory. In Maori, the subject is the only non-prepositional nominal phrase in a basic sentence, and consequently, the treatment of prepositional phrases is crucial to the grammar.

3.0.2 Previous Work on Case

Within the field of Maori studies, prepositions have received quite a lot of attention. Both Maunsell (1842) and Williams (1862) contain very comprehensive lists of Maori prepositions and their numerous "meanings" as suggested by their English translations. Harawira (1950), Ngata (1964) and Wills (1960) derived their comments on prepositions almost entirely from Williams. Hohepa (1967) within the Chomskyan framework recognizes them as markers of various types of nominal phrases. In this respect, his work is largely derivative from Biggs (1961). Biggs establishes a list of prepositions as markers of nominal phrases, and attempts to associate one basic meaning with each (e.g. 1969, 54). However, as he is not working with the idea of deep case, there are some difficulties in accepting all he says. There have been no previous attempts to apply the insights of case grammar to Maori.

3.1 A Fillmorean Approach

3.1.0 Introduction

In Fillmore's writings, the cases changed quite considerably between 1968 and 1971, and it is difficult to know exactly what cases he regards as necessary at any one time. However, for the purposes of this discussion, the following list, based largely on Fillmore, 1971, 376, will be considered:

Agent (A): the instigator of the event

Object (called Neutral (N) here): the entity that moves or changes
or whose position or existence is in consideration

Instrument (I): the stimulus or immediate physical cause of an
event

Source (S): the place from which something moves

Goal (G): the place to which something moves

Experiencer (E): the entity which receives or accepts or experiences
or undergoes the effect of an action

Locative (L): the place where something is located.

(This last case was included in Fillmore (1970), and its necessity for English can be illustrated by sentences like That box contains apples.)

The list is essentially that motivated in Boagey (1973).

Fillmore suggested that for English, each case was associated with a typical preposition, e.g. Instrument: with, Source: from, Goal: to. Some of these associations (notably Agent: by) have been challenged, but some truth nevertheless remains in Fillmore's claims. Prepositions therefore provide one source of evidence for case assignment, and supplement the rather unsatisfactory definitions which can be provided. Essentially, however, it is the problem of making principled

and defensible judgements of case assignment in the non-obvious instances which has provided the biggest stumbling block to an acceptance of Fillmorean theory.

In what follows, each case relationship is discussed in turn, and an attempt is made to discover the range of prepositions occurring with each case, since a superficial survey suggests that the relationship may be closer than in English. The other problems of evidence will be discussed as they arise. The order of treatment has been chosen solely to facilitate the exposition.

3.1.1 Source

The usual marker for this case is i. Some examples of its most basic use (in directional sentences) are:

- (3009) Kua hoki mai rāua i te whare mTraka
 perf return hither they(2) from the house milk
 'They have returned from the milking shed'
- (3010) Kāore anō ngā whanaunga o Tamahae i tae
 not yet the(pl) relative of Tamahae past arrive
 mai i Rotorua
 hither from Rotorua
 'Tamahae's relatives haven't yet arrived from Rotorua'
- (3011) Ka mauria mai te waka i reira
 unspec take-pass. hither the canoe from there
 'The canoe was brought from there'
- (3012) E toru tekau māero pea te tawhiti atu
 num three ten mile perhaps the distance away
 o Rotorua i Taupo
 of Rotorua from Taupo
 'Rotorua is perhaps thirty miles away from Taupo'.

Far more abstract uses of this same marker are also found. They are very often best translated "because" in English, e.g.

- (3013) I te whakatakariri o Tamahae, ka tangi ia
 from the angry of Tamahae unspec cry he
 'Tamahae cried because he was angry'.

It seems plausible to regard the anger of Tamahae as the source of his crying. Now, when this example is compared with:

- (3014) Kua hōhā au i te kanikani
 perf weary I from the dance
 'I am tired of dancing'

- (3015) Mā tonu te whenua i te hukupapa
 white indeed the land from the frost
 'The ground is really white from frost'

- (3016) Kei kāpō ngā tāngata i tō neketai
 might be blinded the(pl) people from your(sg) tie
 'The people might be blinded by your tie',

the similarity is no doubt evident, although these are all stative sentences. The only alternative for the last three, (3014-16), would seem to be Instrument, but in none of them is there an Agent controlling the Instrument, as is found in all the uncontroversial examples of that case. The definition given above for Instrument does not require the co-presence of an Agent, though, and these examples seem to fit the definition given. Semantic descriptions have proved notoriously loose, however, and here there is no other supporting evidence, since i is not the usual preposition for the Instrumental case (see 3.1.2). It seems preferable, then, to accept the surface evidence here, and regard these as Source.

However, the following example raises a further problem:

- (3017) Ko te ahi i riro mai i a ia
 top. the fire past be taken hither by pers he
 i tōna tipuna, i a Mahuika
 from his(sg) ancestor from pers Mahuika

'Fire was fetched by him from his ancestress, Mahuika'.

Riro is a stative verb, and the causer, ia, is marked, as normal, with i. However, the sentence also contains another pair of i phrases, which are very clearly Sources. Now one of the arguments frequently used to establish case membership is that a particular case may occur only once in any one predication. If this is accepted, then i a ia could not be a Source. The obvious classification for it would seem to be Agent, and yet it will be shown in 3.1.3 that this solution is also rather unsatisfactory. If it is accepted, then the cases found in stative sentences would be entirely unpredictable, since Agent seems unsatisfactory for the i phrases in (3014)-(3016).

In addition, some examples with mā and nā would seem possible candidates for Source, e.g.

- (3018) Mā te waimarie rātou e whiwhi karahipi ai
 by the luck they(pl) non-pt win scholarship pro
 'With luck, they will win a scholarship'
- (3019) Nā te makariri rāua i hoki mai ai
 by the cold they(2) past return hither pro
 'They returned because of the cold'.

Such examples are problematic for a variety of reasons. Firstly, the function of ai is not well understood, though, following Chapin (1974), it is treated here as a pronominal copy for the oblique NP

which has presumably been raised from an original deep structure of the form:

(3020a) *E whiwhi karahipi rātou mā te waimarie

corresponding to (3018). (Note that in (3018) and (3019), the Subject is also raised, although this is not obligatory.) The non-raised form, (3020a), is, however, impossible, and there can thus be no certainty about this derivation. The second problem is the number of predications involved. The term "raised" implies that there are two predications, and that (3018) and (3019) are thus nominal sentences with sentential second arguments. If this is correct, then presumably the deep structure for (3018) is

(3020b) *Mā te waimarie [e whiwhi karahipi rātou mā
te waimarie]

rather than (3020a), with the ai of the surface structure arising from co-referential NP pronominalization. Presumably the two occurrences of mā te waimarie must be in the same deep case relationship, but it is no clearer what relationship is appropriate. The only other piece of evidence worth considering is the similarity of these to the actor-emphatic construction (see 2.4.8). Notice, however, that in the above examples the ergative-like grammatical relations are not found, and these are thus less problematic than the actor-emphatic. Nevertheless, the similarities cannot be overlooked. Similar deep structures have been postulated, involving two predications; raising of the Subject can occur in both constructions; and, of course, the same two prepositions, mā and nā occur with the same restrictions on co-occurrence with tense markers. Anticipating, we will see that there is no reason to question the assignment of the actor-emphatic NPs to the Agent case. Only the

animacy of the NPs in (3018) and (3019) argues against the assignment of these also to the Agent case - 'by (the action of) luck' etc. emphasizes the similarity. The alternatives are Source or Instrument. It will be clear that all three cases have a good deal in common; both Agent and Instrument are sources of actions. Source is defined, however, in relation to objects, and not actions. It would thus seem that these NPs might be best not classed as Source, though the evidence is not overwhelming. This has the advantage of leaving i as the sole marker for this case.

3.1.2 Instrument

Since it is clear from the discussion in 3.1.1 that Source and Instrument are not easily distinguishable in Maori, it will be convenient to discuss Instrument next.

The usual Instrument marker is ki, e.g.

- (3021) Tapahia te mīti nā ki te toki
 cut-pass. the meat there with the axe
 'Cut that meat with the axe'
- (3022) I patua te kau e ia ki te rino
 past beat-pass. the cow by he with the iron
 'The cow was beaten by him with a piece of iron'
- (3023) Me āta pao te māhunga ki te rākau
 should deliberately hit the head with the stick
 'Be sure that you hit the head with the stick'.

Biggs says (1969, 90)

After a passive verbal phrase a comment introduced by ki denotes the instrument by means of which the action was performed ... An active verbal phrase may also take an instrumental comment in ki, but in this case a comment in i must also be present.

Although the verb in (3023) is not passive, me takes its agent phrase with e, so it is not clearly an active sentence. However, as an instance of an active sentence, take

- (3024) E tua ana ia i te rākau ki te toki
 pro- chop -gress he prep the tree with the axe
 'He is chopping the tree down with the axe'.

Although most of the instances in the data have fairly concrete nouns as Instruments, there are some indicating that ki is not restricted to concrete instances:

- (3025) I mōhio tonu a Petera ki tērā
 past know indeed pers Petera with that
 tohu ka pureitia e ia he whitu hāte
 sign unspec play-pass. by he a seven hearts
 'Petera knew by that sign that he should
 play a seven of hearts'.

One of the boundaries of the Instrumental case - the Agent/Instrument distinction - appears to be consistently marked by a change in preposition. Compare

- (3026) I whakamatea ia ki te hiko
 past cause-dead-pass. he with the unseen power
 'He was killed by an unseen power (= gas, electricity)'
 (3027) Kei whiua koe e te ture!
 might punish-pass. you(sg) by the law
 'You might be punished by the law!'

These sentences were judged ungrammatical by some informants if (3026) had e and (3027) had ki. I failed to find examples where both prepositions were possible for all speakers. It would therefore seem that in this

area, prepositional usage may provide reasonably reliable evidence for classification. If this is true, then in the following,

- (3028) E horoia ana ngā kākahu e te
 pro- wash-pass. -gress the(pl) clothes by the
 mihīni horoi kākahu
 machine wash clothes

'The clothes are being washed by the washing machine'

(from Hohepa, 1967, 61), te mihīni horoi kākahu should be classed as agentive, and not as Instrumental. This means, of course, that animacy is not a strict requirement for Agent.

It is stated in all the grammars that ki is the marker of the Instrumental. However, the following were found in the data:

- (3029) He tino tohunga tēnei ki te patu i te tāngata
 cls very expert this to the kill prep the people
 mā te mākutu
 by the magic

'This [man] was very expert at killing people
 with black magic'

- (3030) Ka whakaarotia kia kaua e
 unspec cause-plan-pass. should not non-pt
 whakamatea mā te patu
 cause-dead-pass. by the club

'It was decided not to kill him with a club'.

Both come from the same text, from the Whakatane region, and one possibility is that mā is a local Instrumental preposition. This, however, cannot be true, since informants from several other regions accepted these, although several older informants rejected mā in

the second, and preferred ki. With mākutū, mā or nā is also found from other regions, e.g.

(3031) Tokorua ngā tāngata nei mate anake,
two the(pl) people here dead alone
nā te mākutū
by the magic
'Two of these people died by black magic'

(A. T. Ngata, 'He tangi na Rangiuia', Te Wananga, III, p.24, 1930).

A second possibility is that mā/nā for Instrument is the result of interference from English, since mā/nā are frequently equivalent to by, which may mark the Instrument. While this could be true in (3030), where ki is possible, it cannot be true of (3029), where ki is apparently impossible. The third possibility (which is dependent on the rejection of mā in (3030)) is that the mā/nā here marks the Agent (in a non-passive sentence), and not the Instrument. This, of course, preserves the generalization that ki marks the Instrument.

At this point, other uses of mā/nā must be considered. Firstly, there are examples (3018) and (3019), discussed in some detail at the end of the last section, where it was concluded that they might mark either Agent or Instrument. If the argument above holds, then they should be Agent rather than Instrument. If we compare (3028), which has an inanimate e NP, and the examples with mā and nā, then it appears possible that mā/nā NPs are (super)natural forces, whereas e NPs are human-created forces. If this is so (and in the rather limited data available, there is no counter-evidence), there might be some justification for establishing an additional case, Force (marker mā/nā), distinct from Instrument (ki) and Agent (e). This

looks tidy, but is less so when further data is considered (see especially the discussion of Agent, 3.1.3). The use of ki in (3026) is then poorly motivated, however.

Furthermore, the following types of NP are often taken to be Instrumental in English:

- (3032) Kei te hoki mai rāua mā runga pahi
 at(pres) the return hither they(2) by the top bus
 'They are returning by bus'
- (3033) I haere atu ia mā raro
 past move away he by the below
 'He went away on foot'.

These are means of transport, whose case classification is far from obvious, though Agent can clearly be ruled out. Either Force or Instrument seems intuitively justifiable. The following example may be similar:

- (3034) Mā te huruhuru te manu ka rere
 by the feather the bird unspec fly
 'By means of feathers, birds fly',

but this also appears to have more in common with the (super)natural forces discussed above.

In addition, "path" is often marked by mā, e.g.

- (3035) Ka haere tātou ki Ākarana mā Taupo
 unspec move we(pl,incl) to Auckland by Taupo
 'We'll go to Auckland via Taupo'.

Various suggestions about the classification of paths have been made, amongst them Instrument. Certainly Force seems out of the question. Harawira (1950, 32) also gives

- (3036) Haere nā Rotorua
 move by Rotorua
 'Go by way of Rotorua',

and this meaning of nā is listed by Williams (1862), Ngata (1964) and Biggs (1969), although it was not attested in my data. It may be a dialectal form from North Auckland. The early grammars also give rā in this context, but this is not mentioned by Biggs, and was not attested, so may be obsolete. A further example of a non-concrete path is

- (3037) Kei te titiro atu ia mā te: wini:
 at(pres) the look away he by the window
 'He is looking out of the window'.

This inconclusive discussion of Instruments points up some of the major problems of making a case grammar description of Maori. The definitions do not provide clear decisions for the borderline examples. Evidence from prepositions has been shown in this section to lead to contradictory positions. Two other kinds of evidence have been discussed for English. The first involves paraphrases, such as the use paraphrase for Instruments in English. Maori does not have such possibilities in general: their purpose in English appears to be related to information distribution, and Maori has more direct means of achieving such ends. Lastly, co-ordination provides some evidence in English. Maori has no co-ordinating conjunction for prepositional phrases. Conjunction is achieved by juxtaposition, and is thus formally indistinguishable from adding another, different type of argument. Thus

(3038)

E tua ana ia i te rākau ki te
 pro- chop -gress he prep the tree with the
 tokī ki te kani (hoki)
 axe with the saw also

'He is cutting down the tree with the axe and the saw'

represents co-ordination, but in

(3039)

E whakahoki ana ia i te hipi
 pro- cause-return -gress he prep the sheep
 mā runga tarakā ki te tāone
 by the top truck to the town

'He is returning the sheep to town by truck',

the phrases are presumably not co-ordinated in the intended sense.

The possibility of including hoki 'also' may well be a sign of close co-ordination, but it does not seem to be a reliable test. This means that co-occurrence does not provide evidence of case membership in Maori.

It is extremely difficult to invent plausible sentences involving two of the NPs whose case-membership is in doubt, and my informant balked when asked for translations of e.g. 'They were killed by electricity and black magic'. Similarly,

(3040)

*I whakamatea rātou nā te mākutū,
 past cause-dead-pass. they(pl) by the magic
 ki te hiko (hoki)
 with the unseen power also

'He was killed by magic and electricity'

was rejected, but apparently as much because it did not seem credible as because of its structure. Thus evidence from this source is unavailable except in those cases where there is no doubt!

Before leaving the subject of Instrument, two further points must be noted. The first concerns examples like:

- (3041) Ka haere a Tamahae ki te whakakī i
 unspec move pers Tamahae to the cause-fill prep
 te taraka ki te penehTni
 the truck with the benzine
 'Tamahae went to fill the truck with benzine'.

The NP of interest here is ki te penehTni, where the most characteristic Instrumental preposition occurs. The case of the equivalent NPs in English has been the subject of considerable debate (see Boagey, 1973, 4.3 for a summary). If prepositions can be accorded any status as evidence, and if cross-linguistic evidence has any validity (two big if's), then this may be taken as additional evidence pointing to an Instrumental deep case.

The second point concerns examples like

- (3042) Kei mate koe i ngā motokā rā
 might dead you from the(pl) car there
 'You might be killed by those cars'.

Semantically, Instrument would seem plausible enough here, but the construction is the same as that in (3014)-(3016) in 3.1.1, where it was suggested that the i NPs were Sources, and (3017), which might be an Agent. In stative sentences, the cause NP is always marked with i, regardless of e.g. animacy. It appears thus that the construction may determine prepositional use, rather than the semantics. This makes evidence from prepositions totally unreliable. If, then, case membership is determined purely on intuitive semantic grounds, making it - presumably - universal, then it may have little insight to offer for the syntactic description of particular languages.

3.1.3 Agent

In most transitive sentences in Maori, the unmarked NP can be taken as the Agent, e.g.

(3043) Ka horoi a Tamahae i te kēne
 unspec clean pers Tamahae prep the can
 'Tamahae cleaned the can'

(3044) Kua pupuhi a Rewi i te manu
 perf shoot pers Rewi prep the bird
 'Rewi has shot the bird'.

With some intransitive sentences in Maori, there is the same sort of difficulty of assessing the agentivity or otherwise of the animate subject as there is in English. Consider

(3045) Ka taka ia ki raro
 unspec fall he to the below
 'He fell down'.

Here the agentivity seems doubtful, because the natural assumption is that the event is an accident, and accidental action never seems agent-instigated by the victim. However, examples like

(3046) Ka haere ia ki Whakatāne
 unspec move he to Whakatane
 'He went to Whakatane',

although they need not involve agentivity, should probably be taken as involving Agents unless there is clear evidence to the contrary, as the norm would seem to be that such actions are instigated (and performed) by the subject. Thus the unmarked NPs of both transitive and intransitive sentences in Maori are typically Agents.

In stative sentences, as was noted in 3.1.1 and 3.1.2, the instigator of the event is marked by i, e.g.

- (3047) Kua riri au i a Rewi
 perf angry I from pers Rewi
 'I am angry because of Rewi'
- (3048) I mate i a Kupe te wheke nei
 past dead from pers Kupe the octopus here
 'This octopus died because of Kupe'.
- (3049) Ko te ahi i riro mai i a ia
 top. the fire past be taken hither by pers he
 i tōna tīpuna, i a Mahuika
 from his(sg) ancestor from pers Mahuika
 'Fire was fetched by him from his ancestress, Mahuika'.

The "event" status of some of these verbs (e.g. riri) may be doubted, but there are certainly some (like riro and mate) which do seem to fall into the "event" category, and it would seem that these i phrases must be Agentive according to the definition of that case given above.

Further examples are:

- (3050) Kua mau te ika i a Tamahae
 perf caught the fish prep pers Tamahae
 'The fish was caught by Tamahae'
- (3051) Kua pTti te tTma o Te Kaha i te tTma o Te Kao
 perf beat the team of Te Kaha prep the team of Te Kao
 'The Te Kaha team was beaten because of the
 Te Kao team'.

However, it seems that the reading of these as Agents may be an English viewpoint. Whereas the most usual translation of (3050) is that given, the Maori most usually elicited in response to the English is the non-stative

(3052) Kua hopukia te ika e Tamahae
 perf catch-pass. the fish by Tamahae
 'The fish was caught by Tamahae'

(or the active or actor-emphatic versions using hopu). It is presumably entirely possible that the transitive and stative surface structures impose two different classifications on events. Thus a more accurate rendering of (3050) might be 'The fish is in the caught state because of Tamahae' where the part played by Tamahae is less direct than in (3052). It has already been suggested (in 3.1.1) that some such i NPs are best regarded as Sources, and if the full range of examples is considered, i.e. (3014)-(3017), (3042), (3047)-(3051), then it will be seen that only arbitrary boundaries can be drawn. We appear to be dealing with a cline in agentivity from those with e.g. mau, riro, to those like (3014)-(3016). At the one end, Agent seems semantically defensible, although native speakers appear to regard these as somewhat different from indubitable Agents, and at the other end, Source seems defensible. This suggests that the problem lies in the classification being imposed, rather than in the data. Perhaps some 'Indirect Cause' case is required (which might or might not be distinct from Instrument and/or Force). However, the proliferation of cases is not desirable, and thus the problem raised here will not be resolved. It will be assumed in what follows that native speaker intuitions must be respected, and that these are not Agents, but it must be borne in mind that no reliable evidence supports that assumption.

In passive sentences, the Agent is marked by e and this marker of the Agent cannot occur except in passive sentences. Thus we find:

(3053) I pūhia te manu e Rewi
 past shoot-pass. the bird by Rewi
 'The bird was shot by Rewi'

- (3054) Ka tāria nei a Rona e āna
 unspec wait for-pass. here pers Rona by her(pl)
 tamariki
 children
 'And so Rona's children waited for her' (lit.
 'And so Rona was waited for by her children').

As has been mentioned already (see 2.4.6), ko fronts Subjects, and it is therefore common to find Agents in ko phrases, e.g.

- (3055) Ko Tamahae kei te horoi i te kēne
 top. Tamahae at(pres) the clean prep the can
 'Tamahae is cleaning the can'.

However, ko fronts any definite subject, and is thus not associated in particular with Agents, as can be seen from

- (3056) Ko tēnei kupu i tangohia mai i te
 top. this word past take-pass. hither from the
 reo Ingarihi
 language English
 'This word was borrowed from English'.

The actor-emphatic construction, however, does appear to have at least a typical association with Agents, e.g.

- (3057) Nā Hata i whakahaere te kanikani
 by Hata past cause-move the dance
 'The dance was organized by Hata'
- (3058) Mā Pani e horoi te whare
 by Pani non-pt clean the house
 'The house will be cleaned by Pani'.

This construction appears aptly enough named in such examples, and

regardless of what the derivation turns out to be, it seems to distinguish Agents in transitive sentences from non-Agents. Thus, as mentioned in 2.4.8, it cannot be used with experience verbs, such as mōhio 'know', where the subject is not an Agent. Nor can it be used with stative verbs, despite their superficial transitivity, e.g.

- (3059) *Nā te tTma o Te Kao i pTti te tTma o Te Kaha
by the team of Te Kao past beat the team of Te Kaha
'The Te Kaha team was beaten by the Te Kao team'.

This could be read as evidence against the agentivity of such NPs, although it could equally be explained by postulating that the actor-emphatic can only be used with unmarked NPs. In addition, however, there is a good deal of doubt about its use with intransitive verbs. Biggs gives

- (3060) Mā Pita e haere
by Pita non-pt move
'Peter went',

(1969, 73), but this cannot be extended generally to other verbs.

My informant was doubtful about Biggs's example, but gave

- (3061) Mā Pita e haere a mua
by Pita non-pt move pers the front
'Peter will lead',

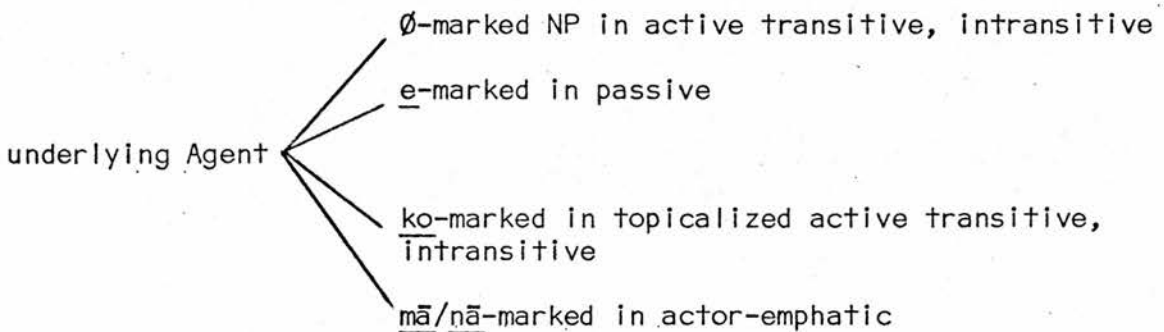
together with transitive uses of haere. It thus appears that, at best, the actor-emphatic identifies Agents in transitive sentences only. The following example throws a little doubt even on this generalization:

- (3062) I ēnei rā, mā te mihīni e mahi te
at these day by the machine non-pt do the
nuinga o ngā mahi
majority of the(pl) work

'These days, most of the work is done by machines'.

It has already been noted that machines take the passive agent marker e, and their occurrence in the actor-emphatic would seem to reinforce the idea that they are indeed Agents in Maori, despite their lack of animacy.

Since there appear to be cogent reasons for deriving ko structures and passives from underlying actives, it would appear that the Agent in Maori is, in underlying structure, relatively restricted in its occurrence. If the actor-emphatic is also a transform of the active, then the superficial expression of the Agent is highly predictable:



3.1.4 Goal

The goal-marker in the clearest cases is ki. In movement sentences, for example, the ki-phrases express the end-point of the action, e.g.

- (3063) Kei te haere ngā tamariki ki te kura
 at(pres) the move the(pl) children to the school
 'The children are going to school'
- (3064) Ka hoe mai rāua ki Moremoretākī
 unspec row hither they(2) to Moremoretakiki
 'They rowed to Moremoretakiki'.

Ki is also used to mark more abstract Goals, as in

(3065) Kei te whakarongo rāua ki a Tamahae
 at(pres) the cause-hear they(2) to pers Tamahae
 'They are listening to Tamahae'

(3066) Kei te whakahThT ia ki a Rewi
 at(pres) the conceited he to pers Rewi
 'He is showing off to Rewi'.

With respect to such examples, there does not appear to be any question of considering Neutral as a case assignment, since the preposition and the semantics both support Goal. However, the situation is less clear in other cases, e.g.

(3067) I mihi ia ki te kōtiro
 past greet he to the girl
 'He greeted the girl'.

Here, the English equivalent appears more likely to have Neutral than Goal. However, a Goal reading - 'His greeting went to the girl' - seems entirely possible, and that, together with the preposition, supports the position that this is a Goal in Maori.

The majority of the experience verbs also take a ki-phrase for which a Goal reading seems intuitively plausible, e.g.

(3068) Kāore a Paki e aroha ki a Petera
 not pers Paki non-pt feel sorry to pers Petera
 'Paki does/will not feel sorry for Petera'

(3069) I tae atu ki ngā wāhine, ki
 past reach away to the(pl) women to
 ngā tamariki hoki te hihiri ki tēnei mahi
 the(pl) children also the desire to this work
 'The desire for this activity reached the women and children, too'

- (3070) He tino mōhio ia ki tana mahi
 cls very know he to his work
 'He really knows his job'.

In (3068), the sympathy is extended to Petera, who can thus be seen as its Goal. In (3069), the ki-phrase under consideration is the final one; the desire extends to the activity. The most controversial is (3070), but a reading where the knowing extends to the job seems possible. Since in the majority of such cases, the Goal reading is at least as satisfactory as a Neutral reading, there would seem to be reasonable grounds for treating all these NPs alike, as Goals. The only problem then is those experience verbs like kite 'see', which have an overt i, e.g.

- (3071) Ka kite ia i ana tamariki
 unspec see he prep his(pl) children
 'He saw his children'.

Even here, a Goal reading seems plausible, but there is no support from the preposition. The problem of the cut-off point between Goal and Neutral will be taken up again in 3.1.6, when Neutral is discussed.

Notional Indirect Objects (for a discussion of this grammatical relation in Maori, see 4.4) are also marked with ki, and are undoubtedly Goals in case grammar terms in Maori, e.g.

- (3072) Kei te pātai ia ki a Tamahae ...
 at(pres) the ask he to pers Tamahae
 'He is asking Tamahae ...'
- (3073) Kei te tuhituhi ia ki tana tuahine
 at(pres) the write he to his(sg) sister
 'He is writing to his sister'

- (3074) Me hoko e koe te tāriana nei ki
 should sell by you the stallion here to
 a Wiremu
 pers William
 'You had better sell this stallion to William'.

Stative verbs, as mentioned in 2.3.6, sometimes take a ki-phrase,
 e.g.

- (3075) Kua riri au ki a Tamahae
 perf angry I to pers Tamahae
 'I am angry with Tamahae'

as distinct from 'because of Tamahae', which is marked by i.

English with is ambiguous between these two readings. The ki-phrase
 in such cases is a Goal. Interestingly, the unmarked form appears
 to be with i.

It is also worth mentioning that in a number of instances
 where Goal status in English is questionable, Maori uses ki, which
 may suggest that in Maori, at least, their status is clear.
 Amongst these are what Fillmore has sometimes called Counter-agents,
 e.g.

- (3076) I pūrei te tīma o Te Kaha ki te tīma o Te Kao
 past play the team of Te Kaha to the team of Te Kao
 'The Te Kaha team played the Te Kao team'
- (3077) Kua tūtuki te pahī ki te kau rā
 perf collide the bus to the cow there
 'The bus has collided with that cow'.

The same is true of expressions of similarity:

- (3078) Rite tonu te tere o Petera ki te tere
 like exactly the speed of Petera to the speed
 o Pita Nere ki te oma
 of Peter Snell to the run
 'Petera is as fast at running as Peter Snell'.

In addition, ki is used to express opinion:

- (3079) Ki a Hata i haere a Tamahae inanahi
 to pers Hata past move pers Tamahae yesterday
 'Hata thinks Tamahae went yesterday'
- (3080) Ki ētahi kōrero ...
 to some(pl) story
 'According to some stories ...'.

All these uses it would seem plausible to regard as instances of the Goal case. It appears that Goal has no other possible marker; I have found no clear examples of Goals as zero-marked subjects.

3.1.5 Experiencer

The Experiencer case was set up in English largely to account for the differences in behaviour between the subjects of stative verbs and the subjects of non-stative verbs. There are two classes of verbs in Maori which must be considered in connection with this case, the stative verbs and the experience verbs.

To recapitulate briefly, stative verbs are characterized by their inability to passivize, their occurrence with i-marked instigators, and their non-occurrence with the actor-emphatic. Williams claims (1862, 49) that,

The imperfect tense with e ... ana is not used with participles [= stative verbs here], all of which imply a completed condition.

This is reminiscent of the restriction on the progressive with stative verbs in English. However, as was shown earlier (see 2.3.6), the restriction does not appear to be true of modern Maori.

Consider the zero-marked NPs of the following statives:

- (3081) Kei te mate wai au
 at(pres) the lack water I
 'I am thirsty'
- (3082) He tino kaha a Tamahae
 cls very strong pers Tamahae
 'Tamahae is very strong'
- (3083) Kua hinga te pēre
 perf be fallen the pail
 'The pail has fallen over'
- (3084) Kei te marino tonu te moana
 at(pres) the calm still the sea
 'The sea is still calm'
- (3085) Ko te ahi i riro mai i a
 top. the fire past be taken hither by pers
 ia i tōna tipuna, i a Mahuika
 he from his(sg) ancestor from pers Mahuika
 'Fire was fetched by him from his ancestress, Mahuika'.

Now it can certainly not be claimed that all subjects of statives in Maori are Experiencers. The most that could be claimed is that the animate subjects of such sentences are. Even this is probably too sweeping a statement. While in the first of these, the subject NP does seem to experience the phenomenon, this does not seem true of (3082). It does not seem reasonable to claim that in

- (3086) Kua hinga a Tamahae
 perf be fallen pers Tamahae
 'Tamahae has fallen over',

Tamahae is in a different case relationship from te pēre in (3083).

The definition of Experiencer, 'the entity which receives or accepts or experiences or undergoes the effect of an action' does not specify animacy, although in practice this has usually been a restriction.

On the other hand, the definition specifies an "action", and none of these stative verbs except possibly the last would fit such a description.

We are left, then, with little evidence for Experiencer here, and an equally good case for Neutral, the only alternative. In favour of the latter is the fact that, on evidence from English, at least, it seems likely that every proposition has a Neutral, and these would no longer be exceptional. A consequence of this decision is that the syntactic properties of the construction would not be predictable from the case relations it contains, since e.g.

- (3087) Kei te tū tika te pounamu
 at(pres) the stand correct the bottle
 'The bottle is standing upright'

also has a Neutral NP as subject (see 3.1.6), and yet has different syntactic properties.

The second group of verbs requiring consideration is the experience verbs. These are characterized by their general lack of true imperatives, their non-occurrence in the actor-emphatic construction, their non-suitability in answer to questions with aha and - with a few exceptions - the case-marking of their second NP with ki. (See the detailed discussion in 2.3.7 for further information.) In addition, it is worth noting here

that they occur with the progressive, unlike the majority of their English equivalents, e.g.

- (3088) E aroha ana ahau ki a Hotu
 pro- respect -gress I to pers Hotu
 'I have great respect for Hotu'
- (3089) E mōhio ana ia he porotaka te ao
 pro- know -gress he cls round the world
 'He knows that the world is round'.

What we are concerned with here is the case of the zero-marked NPs in examples like the following:

- (3090) I kite a Hata i te tuna
 past see pers Hata prep the eel
 'Hata saw the eel'
- (3091) I pTrangi ia ki te wahine rā
 past desire he to the woman there
 'He wanted that woman'
- (3092) Kei te mōhio au ki tō matua, ki
 at(pres) the know I to your(sg) ancestor to
 a Whairiri
 pers Whairiri
 'I know your father, Whairiri' (Biggs, 1969, 103).

These are non-Agents, and correspond to NPs usually classed as Experiencers in English. Considering the zero-marked NPs alone, there would seem to be little doubt that Experiencer is the appropriate classification. Note, however, that if they are treated differently from the stative verbs, the similarities in their syntactic restrictions will be accounted for differently. A potentially more serious problem arises, though,

when it is remembered that in the previous section, it was suggested that the case-marked NP (usually a ki-phrase) should be classed as a Goal. Under this analysis, such predications do not, then, contain a Neutral case, and this constraint on possible case structures has to be dropped. It is extremely difficult to assess the importance of such a constraint, and therefore the lengths to which one should go to preserve it. Suffice it here to point out that presumably either NP in this construction could be pressed into the category Neutral, since the definitions are so vague, and other evidence so hard to come by.

There are a few other examples which might contain Experiencers, notably intransitive, adjectival examples like

- (3093) Ka pai te kūmara ki a au
 unspec good the kumara to pers I
 'Kumara agrees with me'.

Here, however, Goal is presumably also possible, and it is the animacy of the ki-NP which suggests that Experiencer is possible. Not dissimilar, is the example of the previous section, (3079). There, however, the parallel with the inanimate NP in (3080) made Goal seem a preferable solution. It thus appears that the feature animate is probably all that is required to account for the semantics of such phrases, and a special Experiencer case seems unnecessary for examples like these.

Considerable doubt, then, seems to hang over the usefulness or necessity of having an Experiencer case in the description of Maori.

3.1.6 Neutral

Firstly, a word of justification for the choice of label for this case seems called for. Objective, Fillmore's term for this case, comes

uncomfortably close to (Direct) Object, and although it is frequently true that Direct Objects are Objective, the relationship is not one to one. It thus seems preferable to employ a term which avoids this suggestion. The term Neutral is taken from Stockwell et al (1973). The term seems particularly appropriate as this is the case relation with least specific semantic content.

In examples like

(3094) Kua pupuhi a Rewi i te manu
 perf shoot pers Rewi prep the bird
 'Rewi has shot the bird'

(3095) I hanga ngā ariki nei i ō rāua whare
 past build the(pl) chief here prep their (2,pl) house
 'The chiefs built their houses',

the phrases marked with i seem like prototypical Neutral NPs. In transitive sentences, i is usually associated with Neutral, although kite (see (3090) above) may be an exception. If the verb is passivized, the Neutral case NP appears zero-marked, as in

(3096) Kua pūhia te manu e Rewi
 perf shoot-pass. the bird by Rewi
 'The bird has been shot by Rewi',

and may also appear fronted with ko:

(3097) Ko te manu i pūhia e Rewi
 top. the bird past shoot-pass. by Rewi
 'It was the bird that Rewi shot'.

This is also true of the one obligatory NP of the majority of intransitive sentences, e.g.

(3098) Kua taka te pounamu
 perf fall the bottle.
 'The bottle has fallen'

(3099) Kei te tū tonu te rākau
 at(pres) the stand still the tree
 'The tree is still standing'

(3100) Ka pai te kūmara (ki a au)
 unspec good the kumara to pers I
 'Kumara is good (in my opinion)'.

The problem of the case for the Ø-marked NPs of statives has already been considered in some detail in the previous section. Three further examples are considered here:

(3101) Kua whiu ia i te kai
 perf be full he from the food
 'He has had enough food'

(3102) Kua hōhā au i te pīkiniki
 perf tired I from the picnic
 'I am tired of the picnic'

(3103) Kā tonu te puare i te haupapa
 full indeed the hole from the ice
 'The hole is full of ice'.

As stated before, it is possible that animate NPs are Experiencers (those in (3101) and (3102)) while inanimate NPs are Neutral (as in (3103)). However, it was pointed out that this is not entirely satisfactory, and the suggestion was made that all Ø-marked NPs in such constructions are Neutral. The difficulty in making a principled decision results from the lack of evidence available. The final example here, (3103), suggests an alternative analysis, however. In this instance, the hole, te puare, might be considered the location of the ice. On this analysis, te haupapa would be Neutral, and te puare Locative. This is, of course,

counter to the claim of 3.1.1, that the i-phrases in such statives are Sources (cf. (3015)). The analysis could also be extended to many other examples, though not all; not, for instance, to

- (3104) Ka mau te ika i a Tamahae
 unspec caught the fish from pers Tamahae
 'The fish was caught because of Tamahae'.

Te ika is hardly the location of Tamahae. However, the fact that this is a possible analysis of some examples raises the rather crucial question of whether all examples of a particular construction are expected to show the same case structure. Evidence from English suggests that this is certainly not true of all languages, but Maori appears rather more homogeneous in this respect. If this is not so, then accounting for the surface structures of Maori will be difficult in a case grammar. The question is important, and the lack of evidence which might provide an answer is disturbing. I do not, myself, believe that the Location-Neutral analysis above is intuitively correct, and native speakers reject the translation 'Ice fills the hole' for (3103), which most directly reflects the analysis. The issue was raised, however, to show the very thin ground on which much of this type of analysis rests.

The next problem concerns ki-marked NPs in examples like

- (3105) I mihi ia ki te kōtiro
 past greet he to the girl
 'He greeted the girl'
- (3106) Haere atu ki te hongī ki te manuhiri
 move away to the press noses to the visitor
 'Go and press noses with the visitors'
- (3107) Ka mau te marama ki a Rona
 unspec seize the moon to pers Rona
 'The moon seized Rona'

- (3108) Ka whakapāngia atu e Rewi tētahi
 unspec cause-touch-pass. away by Rewi a certain
 rākau ki te waewae o Tamahae
 stick to the leg of Tamahae
 'Rewi touched Tamahae's leg with a stick' (lit.
 'A stick was caused to touch Tamahae's leg by Rewi').

(3105) has already been discussed in 3.1.4, and there it was suggested that, consistent with the prepositional marking, the ki-phrase is a Goal. The same kind of argument also applies to the others. The nose-touching has as its goal the visitor, the seizing has Rona as its goal, and the touching has Tamahae's leg as its goal. However, this same kind of argument would apply to e.g. (3094), i.e. the shooting has as its goal the bird. If the argument is carried through, then the majority of transitive sentences would have Goal rather than Neutral, regardless of whether the preposition is i or ki. This does not seem reasonable. Nor does it seem satisfactory, given the unreliability of prepositions, to say that the argument is acceptable only when the preposition supports it. The alternatives, of course, would be either to claim that in transitive sentences the non-Agent NP was always Neutral, regardless of preposition, or to try to argue that in the examples with ki, the zero-marked NP was something other than an Agent, thus justifying a different case relationship for both. The first alternative is extremely unattractive, since it implies that transitive sentences are isolable without reference to their case structure. This seems to me doubtful in the extreme, especially since it is difficult to elicit judgements about the necessity of arguments, which might help to distinguish transitives from intransitives. In particular, however, experience verbs

seem likely to be problematic. The second alternative seems also doomed to failure: the zero-marked NPs in the examples above would all seem to be "Instigators of the action", and these examples differ from the experience verbs, in that they generally allow, for example, the actor-emphatic, and relativize like the i-phrases of transitive sentences, rather than the ki-phrases of the experience verbs (see 4.3 for further details):

- (3109) Nā Hata i mihi te manuhiri
 by Hata past greet the visitor
 'The visitor was greeted by Hata'
- (3110) *E tangi ana te manuhiri i hongī
 pro- cry -gress the visitor past press noses
 a ia
 pers he
 'The visitor he pressed noses with was crying'.

Consequently, there does not seem to be a supportable point of view, other than taking prepositions at face value. This has the undesirable consequence of assigning different case structures to (3105) and

- (3111) Ka kihi te manuhiri i te kīrimate
 unspec kiss the visitor prep the chief mourner
 'Visitors kiss the chief mourners'.

In short, there does not seem to be an intuitively satisfying solution.

The third problem concerns desentential arguments. It was suggested by Fillmore (1968, 28) that desentential structures following verbs like think, say, decide were Neutral case. Assuming the same to be true for Maori, it would follow that the Neutral case under these circumstances is marked by zero, e.g.

- (3112) Ka kite ia kua māhūe ia i tōna iwi
 unspec see he perf leave behind he by his(sg) tribe

'He saw that he had been left behind by his tribe'

(3113) I whakahoki ia, "He pukapuka tēnei"

past cause-return he cls book this

'He replied, "This is a book"'.
 However, mōhio 'know' usually takes ki, and it is not clear

that such desentential structures are Neutral rather than Goal,
 e.g.

(3114) I mōhio tonu a Hata kua tae mai te tūpāpaku

past know indeed pers Hata perf arrive hither the body

'Then Hata knew for certain that the body had arrived'.

The contrary is rather to be expected, especially considering the arguments given in 3.1.4 for regarding the ki-phrases with these verbs as Goals. It certainly does not seem satisfactory that the internal structure of an NP should cause a change in case relations. A consequence of this would seem to be that in Maori, desentential arguments can be either Neutral or Goal, depending on the type of verb.

There is at least one other preposition which might conceivably mark the Neutral case, and that is mō 'about', as in

(3115) Kei te kōrero a Tamahae mō tana ika

at(pres) the talk pers Tamahae about his(sg) fish

'Tamahae is talking about his fish'

(3116) Ka whakaaro kē rātou mō te nui o te utu o

unspec think instead they(pl) about the big of the price of
 te mahi

the work

'They think instead about how high the wages for the job are',

and possibly also

- (3117) He waiata tēnei mōku
 cls song this about me
 'This is a song about me'.

The status of such NPs is not easy to determine, but, like other Neutral NPs, they can be the subjects of passives:

- (3118) Kei te kōrerotia tana ika e Tamahae
 at(pres) the talk-pass. his(sg) fish by Tamahae
 'His fish is being talked about by Tamahae'.

The approach to subject selection discussed by Fillmore would suggest that this should be good evidence for Neutral, since that is the only case other than Agent which is normally available for subject selection in Maori. None of the other cases would seem to be a contender. Mō has, in addition, a variety of other uses, however, but these do not seem to be instances of Neutral, and are dealt with elsewhere (see 3.1.8).

3.1.7 Locative

In this section, nominal and verbal sentences will be treated separately, since the realizations of the Locative case vary somewhat in these two types of construction.

There are three basic locative prepositions found in nominal sentences in Maori, i, kei and hei, and the distinction between them is temporal. i represents past location, kei present location, and hei future location. The distinction can be illustrated by the following sentences:

- (3119) I te kura ia
 at(past) the school he
 'He was at school'

(3120) Kei te kura ia
 at(pres) the school he
 'He is at school'

(3121) Hei te kura ia
 at(fut) the school he
 'He will be at school'.

Some dialects have ko instead of hei for future locative, see Hohepa (1967), Harawira (1950) and Ngata (1964). These prepositions can also be used for possession of a temporary kind:

(3122) I a Hata taku koti
 at(past) pers Hata my(sg) coat
 'Hata had my coat'

(3123) Kei a Hata taku koti
 at(pres) pers Hata my(sg) coat
 'Hata has my coat'

(3124) Hei a Hata taku koti
 at(fut) pers Hata my(sg) coat
 'Hata will have my coat'.

The first question that must be considered here is the possibility of a bimorphemic analysis of such forms, which would give rise to the following:

Morpheme:	location	tense	
realized by:			
Morph:	-i	ke-	(kei)
		he-	(hei)
		i- or Ø	(i)
and, though not yet discussed,		k- or ki-	(ki)

There is no good evidence for or against this proposal, since none of the tense morphs occurs elsewhere, nor on its own. Clark (1976, 35) notes that the forms are restricted to the Central Eastern Polynesian languages, but although he posits a bimorphemic analysis he is unable to motivate ke- and he- as tense markers in the proto-language. The fact that i occurs as the tense-neutral locative (see later in this section) would have an explanation if this analysis was correct, but since ki can sometimes apparently also have that function, much of the advantage seems to be destroyed. The motivation for this treatment is also much smaller in those dialects which have ko for hei. Faced with a similar problem in Rarotongan, Buse (1963, 397) concluded:

These five prepositions [i, ki, mei, tei, 'ei] ... contain a recurrent partial (-i) which suggests a possible bi-morphemic analysis of the last four. There appears to be little descriptive advantage in cutting, and no reduction of the morpheme lexicon results. A common objection to abstraction of the partial in marginal cases of this type is that it leaves unique morphs as the residue. The purely practical objection to cutting here (and in similar cases in Rarotongan) is that it increases the number of homophonous morphs in a language which ... already has more numerous problems of homophony than others with a more complex phonology.

Since there are no obvious gains in Maori, the forms will be treated here as if they are unanalysable, although nothing that is said hinges crucially on this decision.

These locative prepositions do not generalize simply to temporal location. i marks past temporal location, e.g.

(3125) i ngā rā o mua ...
 at(past) the(pl) day of before
 'In former times ...'

- (3126) I tērā wiki ...
 at(past) that week
 'Last week ...'.

It also forms adverbs such as inanahi 'yesterday', where i is sometimes written as a separate word.

Nō, which has a possessive use to be discussed later, also marks past temporal expressions (notice that it can be broken into the morphs n̄-, -o, and the n- realizes the same morpheme as the n- in nā, which forms the past tense actor-emphatic construction).

- (3127) Nō taua pō ...
 belonging to that night
 'That night ... (in the past)'
- (3128) Nō te waru karaka i te pō ...
 belonging to the eight o'clock at(neut) the night
 'At eight o'clock ... (past)'.

Kei is very seldom used for temporal location. Only one instance was found:

- (3129) Kei ngā pō mārama, kei ngā pō rākau-nui
 at the(pl) night clear at the(pl) night stick-big
 o te marama, e kitea atu ana ...
 of the moon pro- see-pass. away -gress
 'On clear nights, on nights when the moon is full,
 [] is seen ...'.

Notice that this cannot be classed as present, but as timeless.

Kei also appears in some general locative statements, e.g.

- (3130) Kei raro iho te waha i te ihu
 at the below down the mouth at(neut) the nose
 'The mouth is below the nose'.

Attempts to elicit further instances of this temporal use of kei were unsuccessful. Presumably, this is because there are very limited possibilities for referring adverbially to the present moment, the usual one being (in)āianeī 'now, today, presently'. The i in ināianeī is not an isolated phenomenon: we also find

- (3131) *i ēnei rā*
 at these day
 'these days',

so that it may be necessary to claim that i is used for present time locatives. Presumably in (3131) the deictic nei ensures the desired interpretation. Whether the nei of ināianeī is the deictic as well remains doubtful - this form is not entirely transparent.

Hei is also rather uncommon in temporal expressions, though it is more common than kei. The following example is from Wills (1960, 56):

- (3132) *Hei te hokinga atu o Tāreha, ka haere*
 at(fut) the return-nom away of Tareha unspec move
 mai ai koe
 hither pro you
 'When Tareha returns, you shall come'.

Also elicited were the phrases:

- (3133) *Hei te rangi tonu nei*
 at(fut) the day indeed here
 'This very day'
- (3134) *I whakaritea hei te Paraire*
 past cause-ready-pass. at(fut) the Friday
 'It was arranged for Friday'.

Apart from the first example, hei seems to be used only in special circumstances, but what the restrictions are is not clear. My informant tells me that some areas have kei instead of hei for future temporal expressions.

The general marker for future temporal location is a. This, curiously, is not generally included in lists of prepositions, because it is restricted solely to temporal NPs. However, its use in temporal expressions parallels that of i:

- (3135) Kei te haere koe ki hea a te Āranga?
at(pres) the move you to where at(fut) the Easter
'Where are you going at Easter?'
- (3136) A te waru karaka ka tae mai ia
at(fut) the eight o'clock unspec arrive hither he
'He will arrive at eight o'clock'
- (3137) A tērā wiki ...
at(fut) that week
'Next week ...'.

Like i, a forms adverbs of the form āpōpō 'tomorrow' and ākuanei 'presently'.

Some of the examples given earlier will have already shown that i and kei both form what Biggs calls a "pseudo-verbal" continuous tense. Because many Maori words can occur in both nominal and verbal structures, sentences like these can always be translated with a progressive verbal phrase in English, but they cannot be said to have purely verbal character in Maori:

- (3138) Kei te waiata ia
at(pres) the (sing) he
(song)
'He is singing'

- (3139) I te waiata ia
 at(past) the (sing) he
 (song)
 'He was singing'.

The total ambiguity of these structures can be illustrated best by the following question and answer pairs:

- (3140) Kei te aha tō pāpā?
 at(pres) the what your(sg) father
 'What is your father doing?'

- (3141) Kei te mahi ia
 at(pres) the work he
 'He is working'

- (3142) Kei hea tō pāpā?
 at(pres) where your(sg) father
 'Where is your father?'

- (3143) Kei te mahi ia
 at(pres) the work he
 'He is at work'.

Biggs notes (1969, 56):

The Pseudo-Verbal Continuous is an extremely common construction in the Eastern Dialect area where it largely replaces the e ... ana [continuous] tense of the Western Dialect area ...

In this construction kei does not refer strictly to present location, but may also co-occur with future time adverbials, as example (3135) above shows. It is not clear whether this is influence from English, or whether this has always been possible.

One final remark is needed concerning locatives in nominal sentences. Sometimes the locative marker is ki, as in

- (3144) Kāore a Tamahae i roa ki roto i
 not pers Tamahae past long to the inside at(neut)
 te ngāwhā
 the hot pool

'Tamahae was not long in the hot pool'.

No other preposition was judged acceptable here. Examples like this are rare, and it is not at all clear what circumstances demand the use of ki. (Ki, however, is also used for location in verbal sentences, as shown below.)

In verbal sentences, tense is marked in the tense/aspect marker accompanying the verbal phrase. Under these circumstances, it seems that kei and hei can occur only in temporal adverbials, as in (3129) and (3132) above. They cannot be used for spatial location. When they might otherwise be expected, i is found, regardless of the tense marker. This use of i is termed here the 'neutral' time locative, since the tense distinction which has previously accompanied i is apparently neutralized. Thus we find

(3145) Kei te tū te pounamu i runga i
 at(pres) the stand the bottle at(neut) the top at(adnom)
 te tēpu
 the table

'The bottle is standing on the table'.

The i in question is the first of the two; the second begins an adnominal locative, and will be discussed briefly later. In contrast, the following is ungrammatical:

(3146) *Kei te tū te pounamu kei runga i
 at(pres) the stand the bottle at(pres) the top at(adnom)
 te tēpu
 the table

'The bottle is standing on the table'.

Even if e ... ana is used, kei cannot occur in such examples, despite

the fact that e ... ana does not specify tense in itself. Similarly, we have

- (3147) Kāore te tāngata e mokemoke i reira
 not the people non-pt lonely at(neut) there
 'People are not/will not be lonely there',

where i co-occurs with e, which can be either future or present.

Neither hei nor kei can occur here. The negation of both the progressives in kei te and i te involves i:

- (3148) Kāore a Tamahae i te waiata
 not pers Tamahae at(neut) the sing
 'Tamahae is not singing'

(context made it clear that this was a negation of kei te)

- (3149) Kāhore a Tamahae rāua ko Rewi i te
 not pers Tamahae they(2) top. Rewi at(neut) the
 miraka kau tonu
 milk cow still
 'Tamahae and Rewi were not still milking the cows'

(Biggs, 1969, 87). Here the similarity to the earlier examples will be seen if the higher verb analysis of negatives is recalled (see 2.4.4).

Imperatives, which do not have an overt tense marker, also behave similarly, which requires that the environment for the neutral locative be stated as conditioned by verbal sentences, rather than by the presence of a tense marker. Thus we find, for example,

- (3150) Haere ki te titiro i te pānuī i runga
 move to the look prep the notice at(neut) the top
 i te wini o te toa
 at(adnom) the window of the store
 'Go and look at the notice on the store window'.

However, alongside such examples, there are also examples with ki:

- (3151) Kāore e tipu te hua whenua ki reira
 not non-pt grow the fruit land to there
 'Vegetables do not/will not grow there'
- (3152) I kuraina a Pari ki hea?
 past school-pass. pers Pari to where
 'Where did Pari go to school?'
- (3153) Ko wai te taurekareka nāna nei i waiho te
 eq who the scoundrel by him here past leave the
 hō ki konei?
 hoe to this place
 'Who was the scoundrel who left the hoe here?'

(Note that although the gloss 'to' is still used, 'at' is probably well justified.) Sometimes it appears that either i or ki is possible; compare (3144) and

- (3154) Kāore a Tamahae i roa i roto
 not pers Tamahae past long at(neut) the inside
 i te ngāwhā
 at(adnom) the hot pool
 'Tamahae was not long in the hot pool'.

The first was judged preferable, but no clear explanation of the difference was elicited. No information is available on this topic elsewhere, and so a good deal of data is presented and discussed here. In many cases, the difference is explicable in terms of i for state locative, ki for movement locative (probably therefore a Goal), but this does not really seem to account for those above.

There is no lack of examples presenting the distinction just made.

Consider

- (3155) Kei te whakatū au i te pounamu i
 at(pres) the cause-stand I prep the bottle at(neut)
 runga i te tēpu
 the top at(adnom) the table
 'I am standing the bottle on the table',

where the bottle is already on the table, lying down, and is being stood up, cf.

- (3156) Kei te whakatū au i te pounamu ki
 at(pres) the cause-stand I prep the bottle to
 runga i te tēpu
 the top at(adnom) the table
 'I am standing the bottle on the table',

where the bottle is brought to the table, and placed upright on it.

- (3157) Kei te tahu ia i te ahi i te marae
 at(pres) the light he prep the fire at(neut) the marae
 'He is lighting the fire on the marae'

implies that the fireplace is there, established, and the fire has only to be lit, whereas

- (3158) Kei te tahu ia i te ahi ki te marae
 at(pres) the light he prep the fire to the marae
 'He is lighting the fire on the marae'

implies that the fire is transferred from one place to another, and that there is no fixed place for it.

- (3159) Ka puta te kēhua i te kuaha
 unspec appear the ghost at(neut) the door
 'The ghost disappeared out the door'

involves a use of i which may be the Source i 'from', rather than a

a locative, whereas

(3160) Ka puta te kēhua ki te kuaha
unspec appear the ghost to the door

'The ghost appeared at the door'

implies that the ghost appeared, not having been there before. (Note that puta does not have a good equivalent in English: the dictionaries usually list a considerable variety of 'meanings'.)

(3161) Ka waiho au i te tinana i roto
unspec leave I prep the body at(neut) the inside
i te kāwhena
at(adnom) the coffin

'I left the body in the coffin'

implies that the body was already there, whereas

(3162) Ka waiho au i te tinana ki roto i
unspec leave I prep the body to the inside at(adnom)
te kāwhena
the coffin

'I left the body in the coffin'

implies that the body was put there and then left.

(3163) I kōhurutia te tangata i te awa
past murder-pass. the man at(neut) the river

'The man was murdered at the river'

implies that the murder took place at the river, while

(3164) I kōhurutia te tangata ki te awa
past murder-pass. the man to the river

'The man was murdered at the river'

implies that the victim was taken to the river and then murdered.

In all these instances, my informants readily accepted both versions, and had comparatively little difficulty in articulating the differences. That was not always the case, however. Some of the examples where one preposition seemed much more natural than the other are instructive. Firstly, some where i was preferred:

- (3165) Ka kite au i a ia i te awa
 unspec see I prep pers he at(neut) the river
 'I saw him at the river'.

Here, ki, if possible, implies a chase.

- (3166) I haoa te ika nei i te Tai Rāwhiti
 past catch-pass. the fish here at(neut) the coast east
 'I caught this fish on the East Coast'.

Here, ki could only occur as a punchline, for instance, if it had been impossible to catch the fish at a succession of locations, but at last success was achieved at this particular place.

- (3167) I rongo rātou i te kōrero mō te rā i
 past hear they(pl) prep the talk for the day at(neut)
 te hōtēra
 the hotel
 'They heard the news at the hotel'

was natural, ki being possible only if contrast is implied - the news cannot be heard elsewhere.

Ki was preferred in other contexts, but in these cases different meanings for i versions were not forthcoming:

- (3168) Kua tīmataria te mahi ki te hōhipera
 perf start-pass. the work to the hospital
 'The work at the hospital has been started'

- (3169) I tohatoha ia i te pepa ki te marae
 past distribute he prep the paper to the marae
 'He distributed the paper to the marae'
- (3170) I pūtahi ngā rōri ki te pāmu
 past meet the(pl) road to the farm
 'The roads met at the farm'
- (3171) E whakatupu ana rātou i te rīwai
 pro- cause-grow -gress they(pl) prep the potato
 ki te taha i te taiapa nei
 to the side at(adnom) the fence here
 'They are growing potatoes beside this fence'.

In all cases here, the explanation may lie in the fact that the objects do not have their origin in the stated locations, and thus some kind of movement to the location must have been involved. If that is so, only the contrastive use of ki illustrated in (3166) and (3167) lies outside the generalization suggested at the beginning of the discussion.

Ki is apparently used as a disambiguating device in

- (3172) I mate ia ki te awa
 past dead he to the river
 'He died at the river',

where the verb is stative, cf.

- (3173) I mate ia i te awa
 past dead he from the river
 'He died because of the river',

and it is possible that the use of ki for contrast or emphasis may be a related phenomenon.

It must also be noted that in some examples it is unclear whether

the i is Source or Locative. This is true of (3159) above, and e.g.

(3174) E waerea ana te ngāhere i te wahi nei
pro- clear-pass. -gress the bush ? the place here

'The bush is being cleared (from)
(at) this place'

(3175) I te kohi rātou i ngā āpōro
at(past) the gather they(pl) prep the(pl) apples

i te ōhete

? the orchard

'They were gathering apples (from)
(in) the orchard'

There are also instances where ki might be either a Locative or an Instrumental, e.g.

(3176) Ka taona ngā tītī ki roto
unspec cook-pass. the(pl) mutton-birds ? the inside

i ō rātou hinu

at(adnom) their(pl) oil

'The mutton-birds were cooked in their own oil'.

By and large, however, Locatives do not seem to give rise to problems of identification, and they do not appear as subjects or objects as far as the data goes. (One possible counter-example is discussed in 4.4.)

One final point must be made before leaving this area. It concerns the adnominal locatives occurring with locative nouns such as runga 'the top', roto 'the inside'. There are a variety of possible prepositions, i, ki and o all being found, although i is undoubtedly the commonest in present-day Maori. Thus it is possible to have

(3177) Kei te whakatūria te pounamu ki runga
at(pres) the cause-stand-pass. the bottle to the top
(i)
(ki) te tēpu
(o)
of the table

'The bottle is being stood on the table',

where the three correspond very approximately to 'the top on/at the table', 'the top to the table' and 'the top of the table'. Thus it seems to be the case that even here, the Goal/Locative distinction is found between ki and i.

3.1.8 The Residue

It seems important to give some indication of the variety of prepositional phrases left unaccounted for. Some of them might conceivably be assigned to the cases discussed, but motivating such assignments seems impossible. Nothing rare is included here, and thus it seems fair to say that any case grammar theory must ultimately be extended to cover them. Where possible, there is an indication of the kind of case to which these might be assigned.

3.1.8.1 Mā and nā for possession

Mā is used for "possession-to-be", and nā for actual possession. Mā in this sense is often translated as for. These forms can be used only for subordinate possessed entities (see 2.2.4), e.g.

(3178) He kurī tēnei mā Hone
 cls dog this for John
 'This is a dog for John'

(3179) Ka hokona mai e rāua he wati hou mā Tamahae
 unspec buy-pass. hither by they(2) a watch new for Tamahae
 'A new watch was bought by them for Tamahae'

(3180) Nāku ngā kura nā!
 mine the(pl) feather there
 'Those feathers are mine!'

- (3181) He whangai a Hukarere nā Hata
 cls foster-child pers Hukarere belonging to Hata
 'Hukarere is Hata's foster-child'.

Other uses of mā and nā have already been discussed, in particular the actor-emphatic construction (see 3.1.3), when the same kind of "tense" distinction is found. It is not at all clear to what extent the mā and nā of the actor-emphatic construction can be associated with these. However, the same reduced pronominal forms are found in both constructions, and it seems likely that at least the m- and n- morphemes are the same. In addition, there are certain non-verbal structures which seem to have an emphatic effect:

- (3182) Mā ngā kaikōrero o te marae ngā mihi
 by the(pl) ag-speak of the marae the(pl) welcome
 'The welcome speeches will be made by the speakers
 of the marae'

- (3183) Nā te pūru tēnei mahi
 by the bull this work
 'This was the bull's doing'.

Notice the similarity of these to the examples discussed under Source (3.1.1). It remains, however, unclear what case these possessives are instances of. They might be considered to be Locatives, like the overtly locative temporal possessives, but this does not seem particularly satisfactory because of the prepositions. Fillmore has at various times considered a Benefactive case, but the arguments for and against have never been satisfactorily resolved. These might be candidates for Benefactive if such a case could be established on independent grounds, but they do not themselves constitute an argument for such a case.

3.1.8.2 Mō and nō for possession

Mō and nō have uses corresponding to the possessive use of mā and nā but for objects which belong to the category of things possessed dominantly, e.g.

(3184) He hōiho tēnei mō Pita
cls horse this for Peter
'This is a horse for Peter'

(3185) Ka pātai atu ia ki a Rehua mō tētahi
unspec ask away he to pers Rehua for a certain
o ōna tamariki
of his(pl) children
'He asked Rehua for one of his children'.

(Children are normally possessed subordinately, but these were special children.) If the mō-phrase here originates in the same deep structure proposition as the other NPs, this would provide an argument for Beneficiary as well as Goal.

(3186) Nō iwai tēnei whare?
belong to who this house
'Who does this house belong to?'

(3187) He whanaunga katoa ngā toa Māori nōna
cls relative all the(pl) champion Maori belong to-him
'All the Maori champions are relatives of his'.

It has been pointed out already that nō alternates with i as a marker of temporal location (see 3.1.7). This may be an argument for regarding these possessives as locatives. However, the evidence is rather scant, as none of the other three forms have corresponding obvious locative uses.

As mentioned in 2.4.8, Biggs claims that nō also occurs in the actor-emphatic construction, with e ... ana, e.g. (1969, 74)

- (3188) Nōna e †Thore ana i te tia, ka pakū
 by-him pro- skin -gress prep the deer unspec go off
 te pū a Motu
 the gun pers Motu

'While he was skinning the deer Motu's gun went off'.

The classification of this as actor-emphatic was questioned, since the properties of the construction differ from the actor-emphatic with mā/nā, but there is a similarity, namely in the fronting of the actor. It thus appears, in terms of case, that the nō NP here is an Agent, and that these have as tenuous a relation with possessive nō as was found for the uses of mā and nā above.

Mō has a number of other uses which are rather like the "beneficiary" uses of mā, for instance,

- (3189) ... he mihTni hou mō tana poti
 a engine new for his(sg) boat
 '... a new engine for his boat'
- (3190) Ko tana mahi, he kuki mō te rōpū kuti hipi
 top. her(sg) work cls cook for the group shear sheep
 'Her work is/was to cook for the shearing gang'
- (3191) Hōmai he māti hei tahu i te ahi mō te hāngī
 bring a match to light prep the fire for the hangi
 'Bring some matches to light the fire for the hangi'.

3.1.8.3 Other uses of mō

In addition to these "beneficiary" uses, mō expresses a number of other rather indirect relationships (as well as being used in the

sense 'about', as discussed in 3.1.6). Interestingly, several others of these also translate English for. They are grouped roughly below by meaning. The case relations of these (if indeed they do express deep case relations) are not at all clear. (Nor are their English equivalents.)

for (activity)

- (3192) He awa tino pai tēnei mō te hopu tuna
cls river very good this for the catch eel
'This is a very good river for catching eels'
- (3193) Kua pōuri ia mō tana kōrerotanga
perf sorry he for his(sg) talk-nom
'He is sorry for saying what he did'
- (3194) He wā anō mō te tākoro, he wā anō mō te mahi
cls time again for the play cls time again for the work
'A time for work, a time for play'

(not an indigenous sentiment).

for (things?)

- (3195) He pai noa iho te wai mō te tamariki
cls good comparative the water for the children
'The water is fine for children'
- (3196) Kei te tereina ia mō te māero
at(pres) the train he for the mile
'He is training for the mile'
- (3197) He tino pai te pāreti mō ngā ata makariri
cls very good the porridge for the(pl) morning cold
'Porridge is very good for cold mornings'.

Its use is also being extended under influence from English, e.g.

- (3198) ... ētahi tamariki e ruku ana mō ngā moni
 some(pl) children pro- dive -gress for the(pl) money
 '... some children diving for the money',

where i, the Neutral preposition, is used in older texts, and preferred by my informants. It is impossible to indicate the entire range found with mō, and no satisfactory solution to the case category suggests itself, although Goal or Beneficiary would seem the most likely candidates.

3.1.8.4 Me

This is a comitative preposition. Again, the comitative case has been one suggested from time to time, but never clearly justified. Some attempts have been made to argue that comitatives are derived from two underlying predications. However, it seems necessary to point out that me cannot be used to join sentences in Maori, nor to conjoin proper (personal) names or pronouns in traditional Maori. It is sometimes used for the latter in modern Maori (though not well tolerated by older speakers), presumably under the influence of English. Some examples are:

- (3199) Ka oma tika tonu atu ia me tana rākau
 unspec run straight indeed away he with his(sg) stick
 'He ran straight over with his stick'
- (3200) Ka tangohia ake a Rona me te rākau ngaiō
 unspec pull-pass. up pers Rona with the tree ngaiō
 me te kete, me te tahā wai hoki
 with the kit with the bottle water also
 'Rona was pulled up with the ngaiō tree, the
 basket and the water bottle too'.

3.1.8.6 Ki te

This is the normal translation of to preceding the infinitive in English. Such structures in Maori are partially verbal, and partially nominal, containing as they do the singular definite article. At times they are ambiguous with ki as goal + NP, and may, in fact, all be regarded as Goal phrases, e.g.

- (3205) Kei te haere a Rewi ki te tiki i ngā kau
 at(pres) the move pers Rewi to the fetch prep the(pl) cow.
 'Rewi is going to fetch the cows'
- (3206) Kua haere a Mere ki te moe
 perf move pers Mere to the sleep
 'Mere has gone to sleep'
- (3207) Kua tīmata a Tamahae ki te kai
 perf start pers Tamahae to the food/eat
 'Tamahae has started to eat'
- (3208) Tino tere te poti ki te haere
 very fast the boat to the move
 'The boat is very fast'.

3.1.8.7 Possession

There are two further possessive prepositions which must be mentioned, although it seems doubtful whether these represent deep case markers of the variety discussed above. These are the two possessive markers, a and o, for dominant and subordinate possession respectively (see 2.2.4). These forms combine with m- and n- to give the forms discussed in 3.1.8.1 and 3.1.8.2, and also with the personal pronouns to indicate permanent possession. They occur alone, however, as adnominal prepositions of possession, e.g.

(3209) KT tonu ngā pēke a te nuinga
 full indeed the(pl) bag of the majority
 'Most people's bags were full to the brim'

(3210) Kāore he kai moana o Kaingaroa
 not cls food sea of Kaingaroa
 'Kaingaroa has no sea food'.

In adnominal locatives, o alternates with i and ki, as mentioned in 3.1.7, so that we find

(3211) I te haerenga o Puhī i runga
 at(past) the move-nom of Puhī at(neut) the top
 i a Mātaatua ...
 at(adnom) pers Mataatua
 'When Puhī boarded Mataatua ...'

(3212) te tangata i runga o Mātaatua
 the man at(neut) the top of Mataatua
 'the captain on Mataatua'

(3213) Kō te tangata o runga o Mātaatua ko Toroa
 top. the man of the top of Mataatua eq Toroa
 'The captain belonging aboard Mataatua was Toroa'.

A is apparently not used with locatives.

3.1.8.8 Whaka

One further preposition deserves mention, and that is whaka 'towards, in the direction of'. Williams, in his dictionary, says that it is rare, but my informants disagree, although it seems to occur more frequently in spoken Maori than in written texts. Williams's example is

- (3214) Ka mārō a rāua aho, mārō
 unspec stretched out poss they(2) line stretched out
 whaka te ihu ana, mārō whaka te
 towards the nose then stretched out towards the
 kei ana
 stern then
 'Then they stretched their line, stretched it towards
 the prow, stretched it towards the stern'.

The distinction between ki and whaka is that with whaka the 'goal' may not be reached, or may be passed; the NP with whaka specifies the direction of movement. Thus in

- (3215) I haere whaka te tāone
 past move towards the town
 '[He] went towards the town',

he might not be going as far, or he might be going through. Now there would seem to be no doubt that this represents some type of Goal, but if there is just one undifferentiated Goal case, then it will not be possible to predict when ki is appropriate, and when whaka is appropriate. Some speakers also have this preposition for means of transport, e.g.

- (3216) I haere ia whaka te rangi
 past move he via the sky
 'He went by air',

which suggests that it might also be an Instrument. It cannot be pure coincidence that ki is the usual Instrumental preposition. However, no obvious solution within the case grammar framework discussed here seems possible.

3.1.9 Summary

It would appear, thus, that in a Fillmorean account some cases are marked relatively homogeneously, while others (equally basic) are marked in many different ways. It is also clear that certain case markers mark a wide variety of Fillmorean cases (notably i and ki). There are a number of prepositions which do not seem to mark any case recognized in the Fillmorean system, and there are tense distinctions involved in certain prepositions which are (presumably) not part of the case system as proposed by Fillmore. This case system was intended to handle prepositions, but it is evident that Maori presents a number of problems in this framework, while the framework proves helpful in a few areas, such as the use of i and ki to express location, where the relevant distinction does seem to be readily captured by case concepts.

3.2 An Andersonian Approach

3.2.0 Introduction

One of the major theoretical problems associated with a Fillmorean case grammar is that there is no non-intuitive way in which the cases necessary for description can be delimited. As has been shown in the discussion above, there are some places where additional cases might be desirable (e.g. Force) and others where a case might be dispensed with (e.g. Experiencer). Anderson, on the other hand, claims to provide, in his localistic theory, a principled limitation on the number of cases required. In this section, an attempt is made to assess Anderson's model in its application to Maori. The 1971 outline is used, since that is the most detailed available, and later works (e.g. 1977) do not appear to make substantial changes.

Certain initial difficulties arise in the application of the 1971 model. The main one is that it is far from easy to discover what in that account is to be regarded as language-universal, and what is specific to English. Secondly, such tests as are suggested for ascertaining case membership are almost invariably specific to English, and there are frequently no analogous tests possible in Maori. This means that it is often necessary to rely on intuitions, which are difficult or impossible to elicit from informants. I have therefore been forced to rely on my own at times, and as they are those of a non-native speaker they must be treated with some scepticism. Thirdly, much of the argumentation in Anderson (1971) centres round the notion 'stative', which Anderson closely associates with be. As there is no equivalent for be in Maori, it is not clear that any of these arguments apply.

I will start by considering each of the cases proposed by Anderson, and discussing their application to Maori. Anderson begins with a 4-case system, and this is what is discussed. The cases in question

are nom(inative)

 erg(ative)

 abl(ative)

 loc(ative).

Towards the end of the 1971 work, Anderson explores a possible coalescence of erg and abl; however, erg remains as a covert case even in this book and reappears in all subsequent writings, and the identity of erg and abl has since been denied (see e.g. Anderson, 1977, 119). The four cases are therefore discussed separately.

Before examining the Maori data, attention must be drawn to two important aspects of localism as a theory. (For a fuller discussion

of these matters, together with some detailed criticisms of Anderson, 1971, see Bauer and Boagey, 1977.) Firstly, localism takes surface structures, and in particular, prepositions, seriously. Secondly, since localism is founded on the belief that the basic structures of language are concerned with the location of objects and the movement of objects from one location to another, the cases that might most reasonably be expected in a localist theory are one for the object (nom), one for location (loc), one for the place of origin of the object (abl), and one for the destination of the object (allative). The latter is missing from Anderson's list, and ergative - the agent responsible for the movement - is included. One of the strongest arguments for a localistic framework is that it provides a principled limitation on the cases in the framework. It might be questioned whether the inclusion of ergative does not already step outside the limitation; but whatever attitude is taken to this it is clear that if a need for further cases can be shown, the strongest claim of the theory cannot be upheld.

3.2.1 Nominative

This is defined by Anderson largely negatively, the only positive guidance being (i) that every predication must have a nom, (ii) that it is the case of the NP in any one-argument proposition, and (iii) that it is the case of the NP acted upon, moved etc. if there is more than one argument. Thus it does not differ greatly from Fillmore's Objective case. Sometimes, however, a one-argument predication has $\begin{bmatrix} \text{nom} \\ \text{erg} \end{bmatrix}$ governing the single NP. This, according to Anderson, is a nominative case with a 'feature' ergative. Whether this is covertly introducing an additional case is a matter open to question.

In Maori, there are indubitable nominatives in the following

instances:

- (3217) Ka pai ia
 unspec well he
 'He is well'
- (3218) Ka mate ia
 unspec dead he
 'He died'
- (3219) Ka tū te pounamu ki reira
 unspec stand the bottle to there
 'The bottle stood there'.

In all these instances, the nominative NP is \emptyset -marked, and occurs following the verbal phrase in normal (unmarked) word order.

Instances which presumably are $\begin{bmatrix} \text{nom} \\ \text{erg} \end{bmatrix}$ are:

- (3220) Ka waiata ia
 unspec sing he
 'He sang'
- (3221) Ka kai ngā kererū
 unspec eat the(pl) pigeon
 'The pigeons fed',

and, in sentences involving movement,

- (3222) Ka haere atu ia
 unspec move away he
 'He went away'.

The main difference between these and (3217)-(3219) is that in these instances, the action is under the control of the animate being concerned. This is captured in the theory by the use of the feature erg.

As an example of nom in sentences involving a distinct ergative,

take, for instance,

- (3223) Ka patu ia i te kūrī
 unspec hit he prep the dog
 'He hit the dog'.

Here, the preposition i marks the nominative NP. This is also seen in the following example, involving both ergative and locative as well as nominative:

- (3224) Ka whakatū ia i te pounamu ki reira
 unspec cause-stand he prep the bottle to there
 'He stood the bottle there'.

There are four further sentence-types in Maori all of which must contain at least one nom, if Anderson's claim that nom is universally present is correct. Firstly there are sentences which translate English transitive sentences, like the previous one, but which have their second argument introduced by ki; e.g.

- (3225) Ka mau te marama ki a Rona
 unspec seize the moon to pers Rona
 'The moon seized Rona'.

It is hard to see that the NP te marama 'the moon' has a function less ergative here than ia 'he' in (3224). The conclusion therefore must be that Rona is the nom NP here, which means that in at least some cases the nominative may have a case marker other than i.

This is something of a hindrance to taking prepositions seriously as evidence of deep case. The only alternative solution involves rejection of the claim that nom is universally present. There are a number of verbs in Maori which sometimes take their second argument in i and sometimes in ki, and in the majority of instances there is an associated semantic difference. Mark (1970) attempted to unravel

the distinctions, although there appear to be a number of contradictions in her glosses and comments. Her data has been cross-checked with my informants, and the following is based on this revised data. The data is discussed more fully in 4.4.2; however, the following example is typical of the clearer cases:

(3226) Ka kapo au i te pū
 unspec snatch I prep the gun
 'I snatched the gun'

(3227) Ka kapo au ki te. pū
 unspec snatch I to the gun
 'I snatched at the gun'.

In such examples, the ki-phrase appears to have a reading as Goal (in Fillmorean terms), e.g. in (3227) the snatching is in the direction of the gun, or possibly in the vicinity of the gun. The goal may or may not be reached. Not all the examples considered produced a clearcut distinction, e.g. rongo i and rongo ki, with rongo 'hear': though my informant said there was a subtle difference, I failed (on several occasions) to pin it down. It thus appears that in at least some cases it is necessary to accept that the ki-phrase is not a nom, but a loc, since this captures the i/ki contrast. Returning now to the original example, (3225), this is certainly a possibility here, even although the contrast with the i version is less direct:

(3228) Ka mau te marama i a Rona
 unspec take the moon prep pers Rona
 'The moon took Rona away'.

(The sentence is ambiguous; it could also be mau, the stative 'catch', and would then mean 'The moon was caught by Rona'.)

Of course, there is still a means of saving the generalization concerning nom, and accepting these ki-phrases as locs: the \emptyset -marked NP could be labelled $\begin{bmatrix} \text{nom} \\ \text{erg} \end{bmatrix}$. However, there does not seem to be any evidence that would distinguish between [erg] and $\begin{bmatrix} \text{nom} \\ \text{erg} \end{bmatrix}$, i.e. evidence that the au of (3226) and the au of (3227), for instance, function differently. Both (3226) and (3227) are related to the following passive and actor-emphatic (which might be expected to show a distinction):

- (3229) Ka kapohia te pū e au
 unspec snatch-pass. the gun by I
 'The gun was snatched (at) by me'
- (3230) Nāku i kapo te pū
 by-I past snatch the gun
 'The gun was snatched (at) by me'.

It thus appears that the distinction is neutralized in related constructions, although the addition of mai 'hither' to (3229) and (3230) rules out the reading 'snatched at'. This lack of crucial evidence is an all-too-common situation, as will be shown throughout this section.

The second type of sentence is that with stative verbs. The first of the following examples has no causer, the second does:

- (3231) Kua riri a Hata
 perf angry pers Hata
 'Hata became angry'
- (3232) Kua riri a Hata i a Tamahae
 perf angry pers Hata from pers Tamahae
 'Hata became angry because of Tamahae'.

Since such sentences do not require a second NP, the one obligatory

NP must be nom if Anderson's claim is to be upheld. In the above instance, this seems intuitively likely - Hata is the entity located in the state of anger. Where two NPs occur, therefore, i is not the marker of the nominative case; Hata is nominative in the second example also. Consider, however, the following examples:

- (3233) Ki tonu te puare i te haupapa
 full indeed the hole from the ice
 'The hole is full of ice'
- (3234) Kua mau i a Tamahae tētahi ika paku
 perf caught from pers Tamahae a certain fish small
 'A little fish was caught because of Tamahae'.

There appears to be an alternative case assignment in at least the first instance, and the English gloss for the second is not a good reflection of the structure of the Maori and makes the suggested case structure seem more fitting than it really is. The problem with the first has already been outlined in 3.1.6, where the possibility of taking te puare as Locative, and te haupapa as Neutral (i.e. as nom) was raised. This was rejected, but the lack of evidence must be stressed. In the second, a more revealing gloss might be 'A little fish got itself caught through Tamahae'. This gloss still shows, however, that tētahi ika paku is [nom] (or at worst $\left\{ \begin{smallmatrix} \text{nom} \\ \text{erg} \end{smallmatrix} \right\}$) - it is an entity 'located' in the state 'caught'. It appears then that statives in Maori do contain a nom, and thus do not provide counter-examples to the generalization under discussion.

The third sentence type is that involving no verb, e.g. the prepositional type:

- (3235) Nō Pōneke au
 belong to Wellington I
 'I come from Wellington'

or one which is classifying:

- (3236) He pahi kino tēnei
 cls bus bad this
 'This is a terrible bus',

where au and tēnei are certainly noms. (The case status of he pahi kino is uncertain.) It thus appears that the generalization about nom holds true of nominal sentences.

The final sentence type involves experience verbs, as in examples like

- (3237) Ka wareware ia ki taku ingoa
 unspec forget he to my(sg) name
 'He forgot my name'.

Since a discussion of these involves a consideration of abstract locatives, no detailed examination is provided here, but it appears that an analysis under which they contain a nom is possible.

The evidence discussed here thus suggests that there is one class of sentences in Maori which do not contain a nom. This is not only awkward from the viewpoint of the generalization concerning the omnipresence of nom but also from the viewpoint of localism (see the characterization in 3.2.1). The alternative is equally unfortunate for the theory: it is a blow to the idea that prepositions can be taken seriously. One solution has been proposed which accommodates both generalizations, but there is no linguistic evidence for it; it is not even clear that it has intuitive support (if one is not a convinced localist). The situation seems most unsatisfactory.

3.2.2 Ergative

From the sentences which Anderson analyses as containing the case ergative (as opposed to the feature ergative), it appears that this has much in common with Fillmore's Agent, although it is possibly less narrowly defined: it evidently includes some NPs whose status as Agent, Force or Instrument has been questioned in the Fillmorean framework. Anderson establishes the presence of ergative by a number of syntactic correlations: the possibility of imperative and the progressive, and answers to questions with do and happen. These criteria do not appear to work well for Maori.

The formation of the imperative was outlined in 2.4.2, and it will be recalled that intransitives imperativize with (e +)stem, transitives with the passive, experience verbs use kia, if possible at all, and statives use kia. Since statives with only one argument do not contain an erg (see 3.2.1), the association imperative - ergative cannot be simply stated for Maori. Crucial to Anderson's arguments is the behaviour of examples of intransitive verbs with [nom], as opposed to those with $\begin{bmatrix} \text{nom} \\ \text{erg} \end{bmatrix}$. Sneeze is presumably a likely candidate for [nom], and yet in Maori we find:

(3238) Matihē!
 sneeze
 'Sneeze!'

This can be used, for example, to a newborn baby, since a sneeze was regarded as a sign of life. Now it might be argued that this is not a "true" imperative, but this is a matter of intuition, and not a reliable, clearcut one.

The co-occurrence of the progressive, both the kei te/i te progressive and e ... ana with statives and experience verbs, has already been discussed (see 2.3.6 and 3.1.5). Thus there is no evidence that the progressive in Maori is restricted to predications involving erg.

Nor is there a contrast similar to that with do and happen, as there appears to be no Maori equivalent for happen. (Tūpono, given by Biggs in his English-Maori Dictionary (1966) as the translation, is glossed in Williams's Dictionary as 'Light upon accidentally, chance to hit'; it is therefore not equivalent, though it may translate happen on some occasions.)

There are two other possible tests, the actor-emphatic and the Question-Answer pair with aha. If these are used, however, then the experience verbs, defined by these tests, automatically have no ergative. While this is almost certainly true, the circularity is undesirable. More problematic is the fact that some verbs have ergs according to one of these tests, but not the other. It is far from clear what the 'correct' decision is in such instances. If we consider the behaviour of other types of verbs with these tests, then transitive verbs would appear to have ergatives:

(3239) Nā Hata i patu te poaka
 by Hata past kill the pig
 'The pig was killed by Hata'

(3240) Kei te aha a Hata?
 at(pres) the what pers Hata
 'What is Hata doing?'
 Kei te patu ia i te poaka
 at(pres) the kill he prep the pig
 'He is killing the pig'.

However, intransitives do not occur in the actor-emphatic in general:

(3241) *Nā Hata ! waiata

by Hata past sing

'Hata sang',

but they are acceptable as answers to the aha question:

(3242) Kei te aha a Hata?

at(pres) the what pers Hata

'What is Hata doing?'

Kei te waiata ia.

at(pres) the sing he

'He is singing'.

Statives similarly reject the actor-emphatic:

(3243) *Nā Hata i riri

by Hata past angry

'Hata was angry'

(3244) *Nā Tamahae i riri a Hata

by Tamahae past angry pers Hata

'Hata was angry because of Tamahae',

but they are possible as answers to the aha question:

(3245) Kei te aha te tamaiti?

at(pres) the what the child

'What is the child doing?'

Kei te pukuriri ia

at(pres) the angry he

'He is angry'.

Since it has been argued (see 3.2.1) that statives do not have an erg NP as their obligatory argument, the question-answer test

does not define the environment for erg. If it is taken that the actor-emphatic does, then intransitives do not contain ergs in Maori. This, however, is contrary to the claims at the beginning of 3.2.1, where some intransitives are assigned $\begin{bmatrix} \text{nom} \\ \text{erg} \end{bmatrix}$. It is not at all clear which of these claims is to be rejected, but if the actor-emphatic test is, then there is no evidence other than intuition in Maori for the presence of erg.

The clearest cases of erg are those in two-argument sentences, in which the other NP is nominative, e.g.

- (3246) Ka patu ia i te kurī
 unspec hit he prep the dog
 'He hit the dog',

where ia is ergative. Such sentences passivize, when the ergative NP is marked with e. For instance,

- (3247) Ka patua te kurī e ia
 unspec hit-pass. the dog by he
 'The dog was hit by him'.

It is tempting to associate e with ergative (which would accord with taking only sentences with a passive imperative form as containing ergatives). However, the range of NPs which appears in e-phrases does not give this suggestion intuitive semantic support. In the following series, the e-marked NPs become less ergative, until the notion no longer seems relevant at all:

- (3248) Ka pāngia ia e te rūmātiki
 unspec touch-pass. he by the rheumatism
 'He got rheumatism'
- (3249) Ka tapatapahia e ngā kani nunui
 unspec cut up-pass. by the(pl) saw big
 '[They] are cut up by the giant saws'

(3250) I pōkia te rangi e ngā kapua
 past cover-pass. the sky by the(pl) cloud
 'The sky was covered over with clouds'

(3251) I tāia ia e te moe
 past overcome-pass. he by the sleep
 'He was overcome by sleep'.

It would appear that e in Maori is no more reliable than by in English for establishing ergativity. In addition, mōhio 'know', an experience verb takes e in the passive:

(3252) I mōhioia noatia ngā tamariki e ia
 past know-pass. already-pass. the(pl) children by he
 'The children were already known to/by him'.

Stative sentences in Maori with two NPs must also be considered, since the cause of the state is a possible candidate for ergativity. Consider the following:

(3253) Kua mau i a Tamahae tētahi ika paku
 perf caught from pers Tamahae a certain fish small
 'A small fish has been caught by Tamahae'.

The Ø-marked NP, tētahi ika paku, is a nom (see 3.2.1). The cause Tamahae, introduced by i, would seem a semantically plausible ergative. There are some problems with this, however: if the causer is inanimate, e.g.

(3254) Kei mate koe i ngā motokā rā
 might dead you(sg) from the(pl) car there
 'You might be killed by those cars'

(3255) Kua tino hōhā au i ngā rori nei
 perf very tired I from the(pl) road here
 'I'm very tired of these roads'

- (3256) Kei mākū koe i te ua
 might wet you(sg) from the rain
 'You might get wet in the rain'

- (3257) KT tonu te taha o te maunga i te rua
 full indeed the side of the mountain from the hole
 'The mountain-side was full of holes',

then ergative seems inappropriate in at least many instances.

(Another possibility will be considered in 3.2.3.) If some of these are ergative, then this i also represents a preposition of which a unified semantic account cannot be given. Notice also that if such predications contain an erg, the imperative test is even less help than would otherwise be the case.

One further construction appears to contain an ergative - the actor-emphatic, where the mā/nā NP is intuitively an ergative. This means, of course, that the actor-emphatic serves as some kind of identifying test: even if its unacceptability does not exclude erg, its acceptability implies the presence of erg. Notice that the actor-emphatic occurs sometimes with inanimate NPs, e.g.

- (3258) I ēnei rā mā te mThini e mahi
 at(past) these day by the machine non-pt work
 te nuinga o ngā mahi
 the majority of the(pl) work
 'These days, the majority of the work is done by machines'.

At the beginning of this section, it was noted that Anderson's ergative is not linked to animacy, and thus there is no reason to assign this to any other case than ergative.

In conclusion, the main problem with the ergative appears to

be the lack of evidence for deciding the borderline instances. The problem is not new - compare the conclusions to many of the subsections of 3.1 - but it means that on this score Anderson is certainly not superior to Fillmore.

3.2.3 Ablative

This is essentially used to mark the position from which an object moves in Anderson's system. In sentences involving movement, the case marker for the ablative is usually i in Maori. (Note that this poses an immediate difficulty for taking prepositions seriously in Maori: it is semantically improbable that the object and the position from which it moves are in the same case.) The following provide examples of straightforward directional occurrences of this case:

- (3259) Ka haere mai ia i te kura
unspec move hither he from the school
'He came from the school'
- (3260) Ka hoki ia i te pāmu ki te whare
unspec return he from the farm to the house
'He returned from the farm to the house'.

In this second instance, the order of the i and ki phrases is fixed. (The reverse order gives 'He returned to the house on the farm', with no ablative.)

Turning to more abstract examples, the appearance of i as the typical ablative marker, if taken seriously, leads to a reconsideration of the case of the causer in stative sentences like

- (3261) kua riro te paoro i a Piripi
perf seize the ball from pers Philip
'Philip has seized the ball'.

The occurrence of i here might now suggest that the i-phrases in such sentences are ablative rather than ergative. This certainly seems more plausible for the less ergative examples cited above, and for further examples like:

- (3262) Kua whiu ia i te kai
 perf full he from the food
 'He has had enough to eat', or more literally,
 'He has become full with food'.

A gloss of the kind 'He has become full, and the source of the fullness is the food' seems rather more likely than one which emphasizes the ergativity, such as 'The food filled him'. The partial similarity between ergative and ablative noted by Anderson would perhaps then account for the fact that some of the forms marked with i could be taken as ergative. Notice, however, that paraphrases of the kind 'The ball was (originally) with/at/in the possession of Philip' (for (3261)), 'The food was (originally) with him' (for (3262)) are not appropriate. Such paraphrases might be expected with an ablative, and this may be sufficient grounds for rejection of this analysis. If so, there appears to be no alternative to ergative in Anderson's system, even in examples like (3261) and (3262). The extent to which surface case markings are taken seriously obviously has important consequences for the analysis in instances like this. In the absence of tests available to discriminate in such areas, the theoretical stance will determine the analysis. However, the adoption of one theoretical stance rather than another would appear to be necessarily arbitrary on the basis of evidence from Maori alone.

Other more abstract occurrences of i which would probably also be taken as ablatives by Anderson are examples like:

- (3263) I te māngere o Tamahae, ka hokona e
from the laziness of Tamahae unspec buy-pass. by
Hata tētahi mihTni

Hata a certain machine

'Because of Tamahae's laziness, Hata bought a machine'.

Although this is not a simple predication, it nevertheless seems a plausible instance of the ablative.

Anderson also finds abstract instances of the ablative (with a feature ergative) in English examples like:

The book was sold by John to Mary (1971, 130)

John has taught Mary Greek (1971, 138)

and, without ergative as a feature,

Mary received the book from John (1971, 140).

Receive has no single equivalent in Maori, and the other verbs very seldom occur with three arguments. However, the following examples were elicited:

- (3264) I hokona e Hoani te pukapuka ki a Mere
past sell-pass. by John the book to pers Mary
'The book was sold by John to Mary'

- (3265) Kua whakaakona e Hoani a Mere ki te
perf cause-teach-pass. by John pers Mary to the
reo Kariki
language Greek
'John has taught Mary Greek'

- (3266) I whakawhiwhia ia ki te tohu honore
past cause-receive-pass. he to the sign honorary
o te matauranga e te whare wānanga o Wikitoria
of the knowledge by the house learning of Victoria
'He received an honorary degree from Victoria University'.

It must be noted that hoko translates both 'buy' and 'sell' - its meaning is essentially 'exchange' or 'barter'. If necessary, the two are disambiguated with mai (for 'buy') and atu (for 'sell'). The NPs whose ablative status is under consideration here are Hoani in (3264) and (3265), and te whare wānanga o Wikitoria in (3266). Syntactically, all three appear indistinguishable from ergatives. Only in the first of these does the marking of the other animate NP indicate the kind of parallel which supports calling these ablative. In (3264), Mere has kī 'to', and the marking thus supports 'the book went from John to Mary', which has overt marking of John as ablative. However, in (3265) and (3266), the animate NPs are not those with kī. Thus the parallel in these would seem to be (from the marking) 'Mary went from John to Greek' and 'He went from the University to the honorary degree'. Since there is no syntactic reason for associating these NPs with ablative, and since the ablative-allative pairing is contradicted by the marking for the NP Anderson postulates as allative, there would appear to be no reason for calling these anything but ergative in Maori. Alternatively, there is no reason for distinguishing ablative and ergative, and it would seem that ergative rather than ablative dictates the syntactic behaviour. Only hoko thus seems a possible candidate for this kind of abstract ablative. The alternative, of course, is to ignore the overt marking, and save the analysis, but this goes counter to one of the basic postulates of the theory.

It must also be noted at this point that instrumentals, which Anderson links with the ablative, pose problems with respect to a unique ablative marker, a problem which is taken up later.

3.2.4 Locative

As discussed in 3.1.7, there are three prepositions in Maori which express spatial location, i, hei and kei. When they are used for indicating location in sentences of the type

(3267) Kei te whare ia
at(pres) the house she
'She is in the house'

or (3268) Kei te tū te pounamu i runga i
at(pres) the stand the bottle at(neut) the top at(adnom)
te tēpu
the table
'The bottle is standing on the table',

they are undoubtedly all locatives in Anderson's sense. In Anderson's grammar, the locative case is restricted to such examples, which do not involve movement or action. As with the ablative, however, there are abstract counterparts in English, for example:

Part of the truth is known to many people (1971, 101),
and other 'affective verbs' (1971, 102), e.g. understand, need, hate,
love, like. The arguments for this are that these verbs do not
occur in the progressive and imperative, and answers to questions
with do and happen also show the same distribution of syntactic pos-
sibilities as do stative locatives. In Maori, however, there appear
to be no syntactic parallels of this kind which would establish the
equivalents of these verbs as combining with abstract locatives.
Thus, for example, in the progressive, we find both kinds of verb,
see (3268) and

(3269) Kei te mōhio au ki tō matua, ki a Whairiri
at(pres) the know I to your(sg) parent to pers Whairiri
'I know your father, Whairiri' (Biggs, 1969, 103)

(3270) E mātau ana rānei te kōtiro nā ki
 pro- understand -gress or the girl there to
 te kōrero pākehā?

the speak pakeha

'Does the young lady there understand English?'

(Ngata, 1964, 75)

(3271) E pai ana ahau ki te haere ki te whare karakia
 pro- good -gress I to the move to the house sacred
 'I like to go to church' (Ngata, 1964, 98)

(3272) Kei te aroha tonu te wahine ki tāna tane
 at(pres) the love still the woman to her(sg) man

'The wife still loves her husband' (Ngata, 1964, 133),

and the example of mōhio with e ... ana already cited under ergative, (3089). This indicates that any of these verbs can occur in the progressive, whether it is the locative or the verbal tense marker that is used. (The e ... ana progressive presumably provides a more forceful argument in this context than kei te/i te.) Since examples like (3267) are nominal, there are automatically no syntactic parallels with verbal construction.

With respect to the imperative, Biggs notes (1969, 60) that

Any universal base may be used with imperative intonation to give an order ...

No examples of the relevant verbs are attested, but this is probably due to their unlikelihood, rather than their ungrammaticality.

Certainly, such forms can occur, e.g.

(3273) Kia mōhio koe ko au te rangatira o tēnei pā
 let be know you(sg) eq I the chief of this pa
 'You take note of the fact that I'm chief of this pa'.

This is probably a different sense of 'know' from that discussed by Anderson, but it emphasizes the difficulty of applying this criterion. As discussed earlier, there is no direct parallel in Maori for the do/happen distinction in English, and there is no clear parallel between the concrete locative (3268) and such abstract verbs in their behaviour with aha questions. Mōhio 'know', for example, is not an appropriate verb for an answer to such a question, but the status of

(3274) ?Kei te aha te pounamu?

at(pres) the what the bottle

'What is the bottle doing?'

Kei te tū te pounamu i runga

at(pres) the stand the bottle at(neut) the top

i te tēpu

at(adnom) the table

'The bottle is standing on the table'

is at best uncertain, since the question is not normal. The other tests which distinguish the 'experience' verbs as a group do not help here, either. The non-occurrence of the actor-emphatic cannot be taken as a test, since there appears to be a restriction against it selecting a prepositionally marked NP, and relativization strategies are determined by grammatical relations (see 4.3), and not case relations. Thus there appears to be no evidence from Maori either supporting or denying the analysis of

(3275) Ka mōhio a Mere ki te reo Kariki

unspec know pers Mary to the language Greek

'Mary knows Greek'

as having a loc (Mere) and a nom (te reo Kariki), i.e. 'Greek is located at Mary'. The most important piece of evidence appears to be the ki, which suggests an opposing reading, perhaps 'Mary has reached Greek'. Again, the decision is inextricably linked with the importance accorded to prepositions.

In Anderson's analysis, the locative case is also used for the 'Goal' in Fillmore's terms in instances where movement is involved: he has no allative case. The appearance of to in English rather than other locative prepositions is predicted by the [+dynamic] feature on the verb. In Maori, in simple directional sentences, ki always appears as the 'allative' preposition. Thus we find

(3276) I haere ia ki te whare
past move he to the house
'He went to the house'

(3277) I hoki ia i te kura ki te whare
past return he from the school to the house
'He returned from the school to the house'.

Thus it would appear that Anderson's analysis could also apply to Maori: ki appears as the marker for the locative case in sentences involving movement. Further evidence in support of this would appear to come from the fact that kei and hei do not appear as the locative marker in verbal sentences. Thus the following sentence is ungrammatical:

(3278) *Kei te tū te pounamu kei runga
at(pres) the stand the bottle at(pres) the top
i te tēpu
at(adnom) the table
'The bottle is standing on the table',

despite the fact that it expresses a state, and not movement.

In its place, i occurs. (Ki is also possible, but produces a change in meaning.) Thus instead of (3278), we find:

- (3279) Kei te tū te pounamu i runga
 at(pres) the stand the bottle at(neut) the top
 i te tēpu
 at(adnom) the table
 'The bottle is standing on the table'.

(Note, however, that the following occurs in an older text:

- (3280) Ka haere te tamaiti rā, ka tae kei
 unspec move the child there unspec arrive at(pres)
 tona waka hua rewarewa, ka toroa ki
 his(sg) canoe fruit rewarewa unspec push-pass. to
 te wai
 the water
 'The boy went to his seed-pod canoe and pushed
 it into the water' (Orbell, cited in Clark, 1973, 2),

where kei appears in the second conjunct in a verbal context.

This may represent an older form, which has given way to ki nowadays, or it may be a dialectal variant of ki. I have been unable to find any clear explanation. It must be pointed out, however, that if this is the locative kei, then it provides fairly clear counter-evidence to Anderson's claims.)

At this juncture, it is necessary to return to the data presented in 3.1.7 concerning such pairs as

- (3281) Kei te whakatū au i te pounamu
 at(pres) the cause-stand I prep the bottle
 i runga i te tēpu
 at(neut) the top at(adnom) the table

- 'I stood the bottle on the table'
- (3282) Kei te whakatū au i te pounamu
 at(pres) the cause-stand I prep the bottle
 ki runga i te tēpu
 to the top at(adnom) the table
 'I stood the bottle on the table'.

As was pointed out in 3.1.7, ki appears when movement of the object is involved, and i occurs when the object does not change location (though it may, as in these examples, change position in that location). Now these two both have an erg (as opposed to (3279)), but (3279) and (3281) share the same locative marking, differing in this respect from (3282). Accordingly, the difference in marking cannot be dependent on the other cases present. It therefore appears that tū (and many other verbs) will have to be subcategorized as e.g. [\pm movement]; [$+$ movement] will then dictate that the locative has an allative interpretation, and is marked ki, while [$-$ movement] will dictate that the locative has a stationary interpretation, marked by i (neutralizing the tense distinction found in non-verbal contexts).

However, it will be recalled from 3.1.7 that ki was not always clearly associated with movement; in particular, it can be used for contrast or emphasis. This appears to be the case in the following example:

- (3283) ... e tū ana a Kura ki te takutai
 pro- stand -gress pers Kura to the shore
 '... Kura was standing on the shore',

where my informants agreed in accepting

- (3284) ... e tū ana a Kura i te takutai
 pro- stand -gress pers Kura at(neut) the shore
 '... Kura was standing on the shore'

as well, and explained the difference as a matter of precision in location: in (3283), she is standing exactly where land and water meet, but in (3284), she is standing in that vicinity.

By contrast, ki was not considered possible with

- (3285) ... e tū ana a Kura i te one
 pro- stand -gress pers Kura at(neut) the beach
 '... Kura was standing on the beach',

because te one cannot represent a pinpoint location. It is not at all clear how data of this kind is to be accounted for. Nor is there always a clear semantic difference between i and ki, compare

- (3286) E takoto ana tēneki waka ki reira tae
 pro- lie -gress this canoe to there arrive
 noa mai ki tēnei wā
 right hither to this time
 'This canoe has been lying there right to the present day'
- (3287) Takoto noa taua waka i reira tae noa
 lie just that canoe at(neut) there arrive right
 mai ki tēnei wā
 hither to this day
 'That canoe just lay there right to the present day'.

However, my informants were not happy to interchange i and ki in (3286) and (3287). It is not at all clear that (3286) involves movement, and instances of this kind are not rare. However, in

the present state of knowledge, their implications for the theory cannot be assessed.

As a further complication, ki can occur as the locative marker in some non-verbal sentences:

- (3288) E rua ngā pikitia i te wiki ki Kaingaroa
 num two the(pl) picture at(neut) the week to Kaingaroa
 'There are pictures twice a week in Kaingaroa'.

Since sentences of this kind would appear to be stative in the Andersonian sense, the stative locative marker kei would be expected. This example contrasts with

- (3289) E rua ngā pene kei roto i
 num two the(pl) pen at(pres) the inside at(adnom)
 te pouaka
 the box
 'There are two pens in the box'.

Again, informants are consistent in their choice of preposition, and in their rejection of alternatives, but I am unable to ascertain the principles underlying the choice.

It was pointed out in 3.2.3 that in many of the instances where Anderson posits an abstract ablative, accompanied by a directional locative (i.e. an allative), Maori appears not to: thus with whakaako 'teach', whakawhiwhi 'receive'. It has now been established that ki does, in concrete instances, mark the allative, and this confirms the impossibility of taking prepositions seriously and accepting Anderson's analysis. Anderson suggests (1971, 138) that in

Mary knows Greek

John has taught Mary Greek

Mary has learnt Greek from John,

Mary is always an underlying locative. Consider the Maori equivalents:

(3290) E mōhio ana a Mere ki te reo Kariki
 pro- know -gress pers Mary to the language Greek
 'Mary knows Greek'

(3291) Kua whakaako a Hone i a Mere ki te
 perf cause-learn pers John prep pers Mary to the
 reo Kariki
 language Greek
 'John has taught Mary Greek'

(3292) Kua whakaakona e Hone a Mere ki te
 perf cause-teach-pass. by John pers Mary to the
 reo Kariki
 language Greek
 'Mary has learnt Greek from John'.

In all of these the marker identified as locative occurs with te reo Kariki. There are several possible reactions to these facts. The first is to claim that in Maori, prepositions are not determined by deep case relations. This means, of course, that the distribution of i and ki in concrete locative sentences is not explicable on these grounds - although it has just been demonstrated that it is, in at least the majority of instances. A second reaction might be to claim that abstract locatives (and ablatives) are not found in Maori. This is plainly undesirable, since it involves a denial of the universality of the theory, and also poses problems concerning the case structure of such predications as these. A third possible reaction is to claim that knowing (and teaching, learning) in Maori are matters of, for instance, attainment: the relevant paraphrases for these sentences

are then 'Mary has attained (a knowledge of) Greek'; 'Mary has attained, through John, (a knowledge of) Greek'. Under this analysis, (3290) has a nom (possibly a $\begin{bmatrix} \text{nom} \\ \text{erg} \end{bmatrix}$) and a loc; mōhio would have to be sub-categorized as [+movement] to account for the appearance of ki. (3291) has an $\begin{bmatrix} \text{abl} \\ \text{erg} \end{bmatrix}$, a nom, and a loc, and (3292) has the same, differing only from (3291) with respect to choice of subject. It does not appear possible in Maori to have erg as a feature on loc: teach and learn are not lexicalized separately in Maori. This is clearly the most satisfactory solution from the point of view of Maori, but it has important implications for the kind of argumentation used in support of localist theories: Anderson frequently cites small amounts of data from a wide variety of languages in support of his claims, but the discussion in this section makes it clear that a good deal of data from a variety of areas of the language may be required before the significance of any specific data can be assessed. It brings out clearly the problems involved in the use of syncretisms in one language as evidence for an analysis in a different language. (For further discussion, see Bauer and Boagey, 1977.) Perhaps more importantly, this section suggests that rather more of Anderson (1971) is specific to English than might at first appear to be the case. Anderson makes no clear claims on this score, but Lyons (1977, 723-724) in his discussion of an identical localist treatment of knowledge certainly appears to suggest that the only possible analysis is one where Mary (in (3290) above) is a location, and implies that the analysis will have universal application. Such a position is now tenable only if it is denied that Maori has a verb of knowledge, and external evidence for this would presumably be extremely difficult to obtain. It

thus appears that the localistic theories themselves require modification. In a subsequent publication (Lyons, 1979) devoted to a discussion of a localistic analysis of knowledge, Lyons concludes (1979, 141):

I have made it clear at several points that I do not assume that all languages have developed the same range of expressions; and I am willing to concede, if it is shown to be the case, that there are languages for which a non-localistic treatment is either preferable or equally satisfactory. This remains to be seen.

I believe that Maori is a language for which such a concession will have to be made by localists. Any such concession, of course, weakens the claims of the theory to universality.

3.2.5 Prepositions

In this section, an attempt is made to bring together the information about the use of certain prepositions mentioned in the discussion above. This is intended to underline the fact that a unified account of their uses cannot be given.

An examination of the uses of i alone suggests that a unified account is not possible, despite a plausible semantic relation between past location and the ablative. We must consider its use as a marker of the 'instigator' with stative verbs, of direct objects, time adverbials, and its use in the sense "because". First, with stative verbs:

(3293) Kua mau i a Tamahae tētahi ika paku
 perf caught from pers Tamahae a certain fish small
 'Tamahae has caught a small fish' or 'A small fish
 got caught because of Tamahae'

(3294) Kua riri au i a Tamahae
 perf angry I from pers Tamahae
 'Tamahae made me angry' or 'I became angry because
 of Tamahae'

(3295) Kei mate tātou i te makariri

might suffer we(pl,excl) from the cold

'We might suffer from the cold'

(3296) Mā tonu te whenua i te hukupapa

white still the land from the frost

'The ground is still white with frost'

(3297) Kē tonu te puare i te haupapa

full indeed the hole from the ice

'The hole is full to the brim with ice'.

In none of these examples does '(past) location' seem a semantically plausible interpretation for the i phrase. The interpretation 'ablative' is most plausible for (3294)-(3296), but hardly conceivable for (3297) and strained for (3293). In (3297) te puare is plausibly a locative, subjectivized here, (although this was rejected in 3.1.6), and this also appears to be a suitable semantic label for te whenua in (3296), and is possible for tātou in (3295), and perhaps, to a lesser extent, for au in (3294). It seems out of the question, however, for (3293). If these are locatives, then the locative interpretation of the i phrase is presumably to be excluded on the grounds that a particular case can occur only once in a simple predication. Te haupapa in the last example appears to be suitably classifiable as a nominative, and that is also the most likely case for tētahi ika paku (not an i phrase) in the first. (It will be recalled that i elsewhere marks the nominative.) Thus it appears that i might be assigned at least three values here alone: ergative in (3293), ablative in (3294)-(3296), and nominative in (3297). This, however, obscures the fact that there is a constant semantic value through the set, shown by the reading 'X has become Y and Z is the cause' (ignoring the changes of tense/aspect),

where X is the unmarked NP, Y is the stative, and Z is the i-marked phrase. This reading trades on the ambiguity of cause (the causation may be more or less direct) but it indicates that the set of case concepts employed is probably too narrow to account for the variation here. This paraphrase may suggest that two predications are involved, but there is no evidence for such a treatment in Maori. Not even a higher predication analysis escapes the problem of the case of these NPs, since different semantic relations still appear to hold between the (surface) i-phrases and the verb cause (whatever form this might take in Maori).

Beside the last example, the two below also require consideration:

- (3298) I whakakī a Tamahae i te puare ki te haupapa
 past cause-fill pers Tamahae prep the hole with the ice
 'Tamahae filled the hole with ice'
- (3299) I whakakīa te puare ki te haupapa
 past cause-fill-pass. the hole with the ice
 'The hole was filled with ice'.

Here an ergative case has been introduced, with the stative kī transitive by the causative prefix, whaka-. In (3299), the ergative has been deleted in the passive. These examples draw attention to the fact that the causation attributed above to te haupapa is of a very weak kind. (Similar paraphrases are not available for the other examples of the previous set, except possibly the fourth.) Here, it seems more likely that te haupapa is an instrument in Fillmorean terms, a semantic area whose treatment in a localistic grammar will be discussed below.

The use of i to mark Direct Object is rather more difficult to

bring into line with either the '(past) locative' or 'ablative' interpretations. While there is possibly some credence to be given to a locative interpretation of instances like the i phrases in

- (3300) I patu a Rewi i te whenua ki tana tokotoko
 past hit pers Rewi prep the ground with his(sg) walking stick
 'Rewi beat (on) the ground with his walking stick'

and, by extension,

- (3301) I patu a Rewi i te kau
 past hit pers Rewi prep the cow
 'Rewi beat the cow',

native speakers consistently prefer the non-locative translation. In examples like

- (3302) I kari a Hata i te māra
 past dig pers Hata prep the garden
 'Hata dug the garden' or 'Hata dug in the garden'
- (3303) I horoi a Pani i te whare
 past clean pers Pani prep the house
 'Pani cleaned the house' or 'Pani cleaned in the house',

the English locative translation implies lack of (or the irrelevance of) completion of the task. No ambiguity of this kind is found in the Maori examples, which provide no information on completion. Such a distinction, if required, is conveyed by other constructions, e.g.

- (3304) I te māra a Hata e kari ana
 at(past) the garden pers Hata pro- dig -gress
 'Hata was digging in the garden'
- (3305) Kua oti a Hata te kari te māra
 perf finished pers Hata the dig the garden
 'Hata has finished digging the garden'.

It thus appears that there is no sound basis for calling these examples locatives, and in examples like the following, such an interpretation is far-fetched:

(3306) Kei te whāngai a Rewi i ngā poaka
 at(pres) the feed pers Rewi prep the(pl) pig
 'Rewi is feeding the pigs'

(3307) Ka karakia ia i ngā karakia mō ngā
 unspec chant he prep the(pl) incantation for the(pl)
 taniwha moana
 taniwha sea
 'He chanted the incantations to the taniwhas of the sea'.

It is probably precluded by the possible co-presence of a locative, e.g.

(3308) Kei te kai ia i te pūhā i roto
 at(pres) the eat he prep the puha at(neut) the inside
 i te kura
 at(adnom) the school
 'He is eating puha in school',

(although, as pointed out in 3.1.2, since co-ordination and juxtaposition are formally identical, it is impossible to demonstrate incontrovertibly that these are not co-ordinate locatives). It thus appears that i cannot be rejected as a marker of the nominative case in Anderson's framework.

In time adverbials, i varies between a locative and an ablative interpretation. Thus in

(3309) I te Mane, ka haere ia
 at(past) the Monday unspec move he
 'He went on Monday',

the i-phrase is locative, but in

- (3310) I mahi ia i te waru karaka ki te rima karaka
 past work he from the eight o'clock to the five o'clock
 'He worked from eight o'clock to five o'clock',

it is ablative. Note that the difference here cannot be put down to verbal or non-verbal sentences. The difference in interpretation appears to depend largely on the co-presence of the ki-phrase. The following, while not a standard construction, is possible in conversation:

- (3311) I mahi ia i te waru karaka
 past work he at(neut) the eight o'clock
 'He started work at eight o'clock'.

The punctual, locative interpretation is the only possible one. Thus evidence from temporal location suggests that the locative interpretation is more basic than the ablative, since this is the interpretation given when the context provides no clues.

The "because" instances are ones like:

- (3312) I te tino pai o Mere ka mauria ia
 from the very good of Mere unspec take-pass. she
 e Rewi ki te kanikani
 by Rewi to the dance
 'Because Mere was so good, she was taken to the dance
 by Rewi'.

It has already been pointed out that more than one predication is involved here (see 3.1.1). However, it seems plausible that these are ablatives of an abstract kind.

The conclusion from this discussion of i seems to be that i sometimes

marks the past locative, sometimes a neutral locative not marked for tense, sometimes an ablative, and sometimes a nominative. It does not seem possible to reduce the list, since any coalescence leaves a residue that cannot then be accounted for. The coalescence of the two locatives, the most obvious candidates for an unnecessary distinction, depends on a satisfactory explanation of the choice of the past locative (rather than either present or future) as the neutral locative. This may be explainable by the postulation of bimorphemic analyses of kei and hei, as discussed in 3.1.7, but the objections raised there still hold. The coalescence of past locative and ablative is supported by implicational relations parallel to those Anderson uses (1971, 120) to support the locative-allative link. Thus (where \Rightarrow is to be understood as "implies"):

He has come from (came from) London \Rightarrow He was in London

He has gone from (went from) here \Rightarrow He was here

He has gone to (went to) London \Rightarrow He was not in London

He has come (came) here from London \Rightarrow He was not here.

However, this link would necessitate the recognition of two other locative cases (present and future), if past location was taken as ablative, so that the list of cases would not decrease: there would merely be an unexpected gap. Neither an ablative-nominative coalescence nor a locative-nominative coalescence has much to recommend it, even intuitively, although the latter was suggested tentatively by Anderson (1971, 203ff).

Ki also provides some rather large obstacles to taking prepositions seriously. While its use as the allative marker is consistent, the locative use provides problems already discussed (see 3.2.4), as does its use in examples like

(3313) Ka kihi te manuhiri ki te kirimate
 unspec kiss the visitor prep the chief mourner
 'The visitors kiss the chief mourners'

(3314) Kāore a Paki e aroha ki a Pētera
 not pers Paki non-pt sorry prep pers Peter
 'Paki does not feel sorry for Peter',

if the omnipresence of nom is demanded. (Note, as was pointed out in 3.2.1, that it is the omnipresence of nom that requires the label nominative for the ki-phrases here. If this requirement is dropped, then there would seem to be good reason semantically to regard these as further instances of the allative.) Another apparent problem for an Andersonian theory is the appearance of ki as the Instrument marker (see 3.1.2). Anderson says very little about Instrumentals, but appears to suggest that they might be dominated by $\begin{bmatrix} \text{loc} \\ \text{abl} \end{bmatrix}$, i.e. that they are a kind of locative with certain ablative characteristics. However, the typical marker of instrument in Maori is ki, which is, one would imagine, an impossible marker for the case suggested by Anderson. It is extremely difficult to see any semantic links, however tenuous, between instrument and allative. The use is illustrated by:

(3315) Kei whiua koe ki te rākau
 might punish-pass. you(sg) with the stick
 'You might be punished with the stick', i.e. 'You might be beaten'.

Anderson might, I suppose, claim that $\begin{bmatrix} \text{loc} \\ \text{abl} \end{bmatrix}$ is an instance of loc in the presence of abl, and that this loc has therefore an allative interpretation, and thus ki is the expected preposition. This does not, however, appear to be implied in his discussion of Instrumentals in

English, where he appears to associate it with ablative or "path" prepositions (1971, 171-172). It does not seem reasonable that the same case can be interpreted one way for one language and oppositely for another.

There are still a number of prepositions unaccounted for so far in our discussion of the Andersonian framework. These include mā, mō, nā, nō and me. It is necessary to consider whether the localist proposals offer any insights into the distribution of these.

Mā, nā, mō and nō are all used as possessives, but for ownership rather than temporary possession, where i, kei and hei are used. However, ownership is treated by Anderson (1971, 113ff) as involving location, and so we must presume that these four prepositions are also locatives. However, they involve far more than spatial location, being marked both for time and for subordinate or dominant possession. However, it appears that here, unlike the situation with i, kei, hei and ki, a bimorphemic analysis is warranted. These four prepositions can be regarded as containing four morphs, m-, n-, ā and ō, with morpheme values as shown in the following table:

	irrealis	achieved
dominant	m-ō	n-ō
subordinate	m-ā	n-ā

Their use has already been illustrated (see 3.1.8), but one further set of examples is given here for convenience:

- (3316) he kākahu hou mō tana wahine
 a dress new for his(sg) woman
 'a new dress for his wife'

- (3317) Nō Kaingaroa ērā rākau
 belong Kaingaroa those tree
 'Those logs belong to Kaingaroa'
- (3318) He kino tēnā tū pukapuka mā te tamariki
 cls bad that kind book for the children
 'That kind of book is bad for children'
- (3319) Nā te tangata kē koe
 belong the man different you(sg)
 'You belong to someone else'.

Following the bimorphemic analysis, these prepositions involve a temporal location expressed by m- or n-, and a possessive relation, expressed by ā or ō. All four morphemes occur with other uses in the grammar, but m- and n- are always accompanied by either ā or ō.

Firstly, the mā and nā of the actor-emphatic construction must be considered. It seems highly probable that the m- and n- morphs are the same as those above, since the distinction irrealis vs. achieved appears constant. However, these prepositions as they occur in the actor-emphatic have an ergative interpretation. Again, examples are provided here for convenience:

- (3320) Mā te ua taku kanohi e horoi
 by the rain my(sg) face non-pt wash
 'The rain will wash my face'
- (3321) Nāna i hari ngā pēke
 by-he past carry the(pl) bag
 'The bags were carried by him'.

The ā morph here is apparently unrelated to the locative (possessive) ā above, since it is not determined by possession relations, and this

ā appears not to occur elsewhere in the grammar, except in the similar non-verbal sentences, e.g.

- (3322) Nā te pūru tērā mahi
 by the bull that activity
 'That is the work of the bull'
- (3323) Mā rātou te waiata-ā-ringa ki te marae
 by they(pl) the action-song to the marae
 'They will perform the action song on the marae'.

However, to separate this use from the possessive use does not seem entirely satisfactory, especially with nā, where it seems possible to read the nā with a "belonging to" gloss, although a possessive reading for mā seems much less plausible. It is not at all clear what arguments might be brought to bear on this problem.

Mā and nā also occur as markers of 'by way/means of', e.g.

- (3324) Kei te hoki rāua ki te kāinga mā runga
 at(pres) the return they(2) to the home by the top
 pahi
 bus
 'They are returning home by bus'
- (3325) Nā hea mai koutou?
 by where hither you(pl)
 'By way of what place did you come?' (Biggs, 1969, 57).

Anderson deals with English examples like the last (1971, 169ff) as $\begin{bmatrix} \text{loc} \\ \text{abl} \end{bmatrix}$ (and note that this is the same as his assignment for instrumentals). There are two reasons for dissociating these from either of the other uses discussed. Firstly, these two prepositions do not here contrast in tense-marking. Mā can occur with i as readily

as with other markers when it has this sense. (In the actor-emphatic construction, it will be recalled, it co-occurs solely with e.)

In addition, it does not have the 'subordinate' possession restrictions here, which suggests that there is no link with the possessive use. Neither is there any reason to link these with the instrumental marker ki, although as discussed in 3.1.2, these prepositions are used under poorly understood conditions for instrumentals. It seems, therefore, that at least three different mā's and nā's must be postulated.

The use of mō for 'about', and other oblique relations must also be mentioned, e.g.

- (3326) Ko te kōrero pakiwaitara tēnei mō Rona
 eq the talk lying this about Rona
 'This is the story of Rona'.

There seems no reason to link this with any of the uses previously discussed, and it is not at all clear that this could reasonably fall within any of Anderson's four cases except the ubiquitous nom.

Me is the comitative marker in Maori. Although we have seen that m- might be the realization of a tense-marked morpheme, and although e occurs alone as the agentive marker in the passive, there does not seem to be any sense in regarding me as bimorphemic. It occurs in such instances as

- (3327) Ka tangohia ake a Rona me te rākau
 unspec pull-pass. away pers Rona with the tree
 ngaiō, me te kete, me te tahā wai hoki
 ngaio with the basket with the bottle water also
 'Rona was pulled up, with the ngaio tree, the basket,
 and the water bottle too'.

(Note that this is not used for persons, when a collective pronoun together with ko is used.) Anderson says little about comitatives, but there is a suggestion that they are also a type of locative (1971, 203-204). There is, again, no evidence from Maori that me is to be treated as such.

It is useful as a summary to display the range of prepositions which Anderson's theory suggests are locatives. They pose very considerable problems for a theory like his aiming to take prepositions seriously:

Stative locatives: i, kei, hei (tense-marked); i, ki(?)

(tense-neutral)

Directional locatives: i, ki

Path locatives: mā(?), nā

Possessive locatives: mā, nā, mō, nō

Instrumental locatives: ki, mā(?), nā(?)

Temporal locatives: i, nō, kei, hei, a (tense-marked)

Comitative locative: me.

The list contains ten distinct forms. As has been shown, not only do many of these have other uses which appear to be non-locative, but they also overlap in a complex way amongst themselves. It does not seem that Anderson's proposals come anywhere near providing an adequate account of this area.

3.2.6 Conclusion

As has been shown, it does not seem possible both to provide unified accounts of the occurrence of prepositions, and to account for semantic intuitions. Furthermore, in many of the areas where

English appears to provide at least a little syntactic support for the analyses Anderson proposes largely on intuitive grounds, there is no syntactic support for similar analyses in Maori, and at times such syntactic evidence as is available points in an opposing direction. This means that an examination of Maori calls into question the extent to which Anderson's analyses apply to languages other than English - and certainly suggests that they are not universally valid. This, in turn, raises very crucially the question of the value of evidence from other languages, which Anderson draws upon when it is advantageous to do so.

Despite a superficial attractiveness in the localist proposals, it seems that they do not provide a more insightful analysis than Fillmore's proposals, unless they do so by allowing the tense and aspect markers of Maori to be handled without separate machinery. While Anderson (1973) puts forward proposals to this effect, there appears to be no reason why a Fillmorean grammar might not also be similarly extended. Perhaps the most important point to emphasize is the similarity in what these two types of case grammar can handle, and what they leave as 'residue'. It is also important to point out that the question of acceptable evidence arises similarly in relation to both types of grammar. Neither, then, seems to have clear advantages over the other.

3.3 Dik's Proposals

Dik's Functional Grammar (Dik, 1978) includes a case-grammar type of component, in addition to components handling grammatical relations and information structuring. Basically, many of the

problems with his proposals resemble those discussed above, and it is only the attractiveness of his theory as a whole which warrants the brief discussion of his suggestions in this section. Dik claims (1978, 39) that the difficulty with Fillmore's proposals is that his cases are too broad. In this, of course, he takes the opposite point of view to that taken by Anderson. Dik begins from a classification of events into four types, and then outlines the cases required for each event type. The event types, his 'states of affairs', are based on two parameters, [Dynamism] and [Control]. Since cases (or 'semantic functions', as he calls them) depend on type of state of affairs, problems of evidence might be expected to be reduced. In outline, his theory is as follows:

Parameters	State of Affairs	Associated Semantic Functions	Example
+ Dynamic + Control	Action	Agent, Goal, Recipient Direction, Source	John felled the tree
+ Dynamic - Control	Process	Processed, Force, Goal, Recip/Dir/Source	The tree fell down
- Dynamic + Control	Position	Positioner, Location Goal	John stood on the tree
- Dynamic - Control	State	Zero, Time, Location	The tree stood in the forest

There are a number of points which must be clarified. These semantic functions are those which are (or can be) nuclear to such predications. Other semantic functions, such as Instrument (p.27), Dik calls 'satellites'. The parameters are motivated by associated syntactic restrictions, such as that only [+ Controlled] states of affairs occur in imperatives (p.35). He discusses briefly

the reasoning behind not having a case corresponding to Fillmore's Experiencer, saying (p.43):

I believe that the various expression types found in natural languages reflect different conceptualizations of the notion of experience, and that these conceptualizations follow the model of types of states of affairs which are not experiences.

Thus, I am hungry follows the type State, whereas I enjoyed the music follows the type Action (presumably).

Such a theory seems at first glance to be a more likely candidate for a universal theory than e.g. Fillmore's. However, I want to raise some problems regarding these states of affairs in Maori. In particular, stative sentences will be considered, since the semantic relations expressed in such sentences do not appear to be at all homogeneous. The following representative examples of the structure will be considered:

- (3328) Kua riri au (i a Tamahae)
perf angry I from pers Tamahae
'I am angry because of Tamahae'
- (3329) Kei te mate wai au
at(pres) the lack water I
'I am thirsty'
- (3330) Kei mate tātou i te makariri
might dead we(pl,incl) from the cold
'We might die of cold'
- (3331) Kē tonu te puare i te haupapa
full indeed the hole from the ice
'The hole was brim full of ice'
- (3332) Kua hinga te pēre
perf fallen the pail
'The pail has fallen over'

- (3333) Kua mutu te kai a Tamahae
 perf finish the food of Tamahae
 'Tamahae has finished eating'
- (3334) Kua mau te ika i a Tamahae
 perf caught the fish from pers Tamahae
 'The fish has been caught because of Tamahae'
- (3335) Kua pīti te tīma o Te Kao i te
 perf beat the team of Te Kao from the
 tīma o Te Kaha
 team of Te Kaha
 'The Te Kao team has been beaten because
 of the Te Kaha team'.

Consider first the feature [Controlled]. (There appears to be an expectation that the Controller will appear as Subject.) Now, in (3328) au is presumably not in control, but if there is an i-phrase, then (if it is human), the referent of that is probably in control. In (3329), there is not normally a controller. (3330) poses problems, since, although the suffering is controlled by te makariri, it does not seem reasonable to impute the ability to decide on the action to a non-animate. Presumably, (3330) is therefore [- Control]. (3331) is more straightforward, and [- Control]. (3332) is also [- Control]. In (3333), the stopping is presumably in Tamahae's control, but since he is not an independent participant (but mentioned in a possessive phrase), [- Control] is presumably required. (3334) poses real difficulties, since the role of Tamahae seems far from clear. This must be contrasted with

- (3336) Kua hopukia e Tamahae te ika
 perf catch-pass. by Tamahae the fish
 'The fish has been caught by Tamahae'

where control is unquestionably present. In (3334), however, although Tamahae is implicated, it appears that the getting caught was possibly not under his control, and - presumably - not in the fish's either. However, this state of affairs can occur in imperatives, and should thus, by Dik's criteria, be [+ Control]. It appears impossible to decide between these contradictory conclusions. Finally, in (3335), it should be clear that, under normal circumstances, neither side individually controls the outcome, but both contribute. Here, it seems that the commonsense answer is that both and neither are controllers.

Consider now the feature [Dynamism]. (3328) is the equivalent of either I got angry or I am angry, which would appear to differ in dynamism. Aspect is presumably not intended to contribute, so, on the basis of what happens with i 'past' for kua, let us agree on [- Dynamic]. (3329) appears also to be [- Dynamic]. (3330) resembles (3329) closely - they have the same verb - but (3330) appears more likely to involve change of state, and thus uncertainty remains, since the range of meaning for mate here runs from 'suffer' to 'die'. (3331) appears to be [- Dynamic]. (3332), however, is [+ Dynamic], as are (3333), (3334) and (3335) in all probability, although their likeness to English passives (which can be, but are not necessarily statives) might suggest the opposite. Thus we have:

	Control	Dynamism	State of Affairs
(3328)	?	-	?
(3329)	-	-	State
(3330)	-	?	?
(3331)	-	-	State
(3332)	-	+	Process
(3333)	-	?	?
(3334)	?	?	?
(3335)	?	?	?

In only three examples is it possible to feel reasonably certain of the state of affairs presented in the sentence. Since semantic functions are determined by the states of affairs, only in these three examples is it possible to determine semantic functions with any certainty. Even here, problems can arise. Consider (3331): te puare appears to be Processed, but it is not clear whether te haupapa is Force or Source. (For further discussion of problems with Dik's semantic functions, see Bauer, 1980.)

Thus it must be concluded that states of affairs are no easier to decide than cases. The problem illustrated here raises one of the most difficult issues in this area of linguistics. On the one hand, it seems reasonable to accept the point of view that an act of catching (for example), as an act, is independent of language, and is therefore the same state of affairs in all languages. On the other hand, in Maori alone, the act of catching can be expressed by two widely differing structures which appear to represent two different states of affairs (see (3334) and (3336)). Presumably, they express different conceptualizations of the act of catching (to echo Dik's remarks on Experiencers, quote above). But if a solution following these lines is to be found, then it is necessary to decide (non-arbitrarily) which states of affairs directly conceptualize which acts, and which acts are pushed into a mould less directly representing them. Such a task runs great risks of being language or language-family determined.

It thus seems that Dik's approach to semantic functions

is not, in fact, superior to the others discussed in Chapter 3, but produces the same kinds of problems, just in somewhat different places.

3.4 Concluding Remarks

The most noteworthy result of this investigation is the fact that remarkably similar kinds of problem arise, regardless of the individual approach taken. It is the same areas of the language which give rise to problems in each of these accounts. One of the causes of this is probably the Indo-European breeding ground of such theories: the areas of Maori which are most awkward for the theories are those with no counterpart in Indo-European, such as the stative structure.

The other point which must be emphasized is that all three theories create similar problems regarding evidence: in all instances, there is a disquieting lack of evidence available for handling borderline examples. Only intuition is available, and, of course, examples are borderline precisely because intuitions are uncertain.

On the positive side, it should be clear from the discussion that case concepts provide illuminating ways of describing at least some aspects of Maori. Most notably, perhaps, cases would seem to be a useful way of describing the distribution of i and ki in locational sentences, an area which occasions learners considerable difficulty, and is untouched in previous grammars, possibly because the generalizations were unavailable without deep cases, and possibly because it was not realized before the advent of case grammar that such questions were properly the province of grammatical description.

4.0.0 Introduction

Since the literature on Relational Grammar (henceforth RG) is rather scattered and incomplete, it seems necessary to begin by rehearsing briefly some of the basic assumptions of this theory. The theory is still developing rapidly, and the account given here, based as it is on published sources, necessarily represents an early stage. More recent developments are apparently circulating in manuscript form in the U.S.A., but were not available to me. The most important change appears to be the incorporation of the notion that grammatical relations are redefined after each transformational cycle (see Comrie, 1979).

The work currently referred to as 'Relational Grammar' stems from two different sources, and there are therefore two distinct strains. The first received its impetus from Keenan and Comrie's work on relativization in about forty languages. They postulate that relativization is subject to the 'Noun Phrase Accessibility Hierarchy',

$$\text{Su} \geq \text{DO} \geq \text{IO} \geq \text{Obl} \geq \text{Poss} \geq \text{Obj of Comp}$$

(see e.g. Keenan and Comrie, 1977, 1979). This is to be read as a claim that in any language, Su(bject) NPs will be easier to relativize than D(irect) O(bject)s, (or as easy), and DOs will in turn be easier to relativize than I(ndirect) O(bject)s, (or as easy) etc. They also claim that if NPs at point \underline{x} on the hierarchy can be relativized, then so can NPs to the left of \underline{x} on the hierarchy. Furthermore, they claim that any relativization strategy will operate on a continuous segment of the hierarchy. Thus a language might have two relativization strategies, A, which applied to Sus and DOs, and B, which applied to IOs and Obl(ique) NPs, and be unable to relativize Poss(essor)s or Obj(ects) of Comp(arison).

No language exists, according to the predictions of the hierarchy, which uses strategy A for Sus and ObIs, and strategy B for IOs, but cannot relativize DOs. This preliminary hypothesis has been shown to be inaccurate in certain respects, which will be discussed later. More importantly, it has led to attempts to specify the notion Subject (and other relational terms) on a universal basis, and, as a corollary, has led to the development of a rather greater understanding of the variety of types of Subject NPs across the languages of the world. Explicit definitions of the terms in the A(ccessibility) H(ierarchy) are essential to the theory, since it has been argued that not only relativization, but also other transformational processes such as passivization and Equi NP Deletion, should be formulated universally using as primitives in the theory the relational notions 'subject of', 'object of' etc. The chief trait which distinguishes this strain of RG from the other is its concern with increased understanding of relational notions; it has been used as a basis for collecting and interpreting data rather than as the basis of a theory about language.

The second strain is that associated with Perlmutter and Postal, and appears to have its origins in Postal's On Raising (Postal, 1974). Until recently, all work immediately dependent on this theory, which has given its name to both strains, referred to lectures by Postal and Perlmutter, and to a forthcoming book. However, the book is apparently no longer forthcoming. Consequently, the knowledge available about the theory is derived from a host of secondary sources. The theory bears in its chief postulate a remarkable resemblance to the AH proposed by Keenan and Comrie. Postal and Perlmutter also propose that relational notions should be primitives in grammatical theory. They put forward a R(elational) H(ierarchy) of the following nature:

subject
 direct object
 indirect object
 other NPs,

where the first three are 'terms', and the others 'non-terms'. This gives the first three a special status in the theory, as opposed to other types of NP. A major claim of this theory is that transformations involving the movement of NPs serve to promote an NP from one position on the hierarchy to a (higher) term status. The promoted NP then accepts the properties formerly associated with NPs in that position, while the displaced NP is demoted, or in their terminology is put 'en chômage', or becomes a 'chômeur'. It then ceases to bear a grammatical relation to the verb. A number of the 'laws' formulated with respect to the RH bear a close resemblance to properties associated with the AH, discussed above. However, a much more explicit list of laws has been formulated by adherents of this branch of RG, but many of them have been shown to need considerable modification, or to be untenable. I assume it is this which has caused the proposed book to be withdrawn. Some of the evidence against their position will be discussed below.

Whatever our final conclusions about the viability of RG as a theory of language, it appears that many positive contributions have come from both strains, and that a discussion of many linguistic features in Relational terms has brought to light a number of very interesting generalizations and idiosyncracies about languages. In what follows, I shall discuss a number of properties of Maori from a Relational viewpoint, both because it sheds some light on a number of vexed problems of Maori grammar, and also because data from Maori raise some further issues of

a significant kind in the development of a theory of grammar taking grammatical relations as primary, and as hierarchically related. First, however, some of the previous discussion of specific issues in Relational Grammar will be briefly outlined.

4.0.1 Some Explicit Claims of RG

It has been proposed that many constraints on possible combinations of rules in any one language, as well as on effects of rules, can be predicted in terms of the Relational Hierarchy. Some of the most important, derived largely from Johnson (1977a), are characterized below:

- (i) No NP can have more than one grammatical relation with the verb;
- (ii) Whenever an NP is demoted by a promotion rule, it becomes a chômeur, and is therefore unable to control processes controlled only by terms, or undergo processes undergone only by terms;
- (iii) Any rule which alters the 'termhood' of an NP must promote the NP to a position further up the hierarchy;
- (iv) No language can have two rules, one promoting indirectly up the hierarchy, and one promoting directly up the hierarchy;
- (v) No rule can apply to a non-continuous segment of the hierarchy.

It will be seen that if such 'laws' (as they are usually termed in the Postal-Perlmutter variant) could be held valid across all languages, they would constitute tight constraints on the rules of languages, and thus merit serious attention.

No evidence has come forth yet, to my knowledge, which contradicts assumption (i). However, some evidence has been advanced which questions

crucially the existence, in certain languages at least, of some of the 'terms'. Thus Schachter, for example, has argued (Schachter, 1977a) that there is no 'subject' in Philippine languages, but rather that those properties characteristic of 'subjects' in languages where this category can be clearly established, are shared between two types of NP: the reference-related properties are associated with the 'topic' NP, and the role-related properties are associated with the 'actor' NP. Plainly, the existence of languages lacking the highest term in the hierarchy poses problems for constraints which assume the universal validity of the hierarchy. The second major challenge to the hierarchy is made by Gary and Keenan (1977), who claim that in Kinyarwanda, IOs are, in terms of their relational properties, indistinguishable from DOs, and that it is thus necessary to allow for the possibility that two NPs may simultaneously hold the same grammatical relation to the verb, even if they are far enough up the hierarchy to be 'terms'. Again, this questions the validity of the strong hypothesis about the hierarchy. (Note, however, that the AH, which makes much weaker claims, can accommodate this fact.)

Thirdly, Kisseberth and Abasheikh (1977) put forward data from a Bantu language, Chi-Mwi:ni, which suggests that the grammatical relation DO may not be uniquely identifiable in all sentences. They establish several properties characteristic of clear instances of DOs, one of which is ability to passivize. They then examine a variety of sentence-types where two NPs dependent on the verb can passivize, although only one of them has the remaining DO properties. This suggests that, again, it may be necessary to allow for two NPs to occupy a relational slot, but this time to be in a more/less relationship. This again seems counter to any strong claims about the RH. The grammatical relation that has been questioned

most often, in a wide variety of languages, is IO, and it has been suggested (Comrie, personal communication) that IOs in all languages are treated either as DOs or as Obl NPs. This is consistent with the claims of the AH, but not with those of the RH.

There have also been a considerable number of challenges to the second of the above laws. They fall into two major classes: those that challenge the necessary creation of a *chômeur* (i.e. those that claim that promotion can occur without demotion), and those that claim that demotion can occur without necessarily accompanying promotion. Amongst the first are Anderson's arguments (Anderson, 1978) that under the Dative-movement rule, the demoted DO does not exhibit typical *chômeur* behaviour. (This is only a very small part of his argument, since he also argues that the promoted IO does not take on the expected DO properties, and since the aim of his argument is to show that Relational Grammar cannot make the correct predictions about these two types of NP.) However, the observations relevant to (ii) above concern the possible insertion of adverbials etc. between a verb and its DO, and also Heavy NP Shift (which Anderson calls Complex NP Shift). The ungrammaticality of *John gave very frequently Chuck *akvavit* is predicted on the RG analysis where Chuck has become a DO, and akvavit a *chômeur*. However, the demoted DO does not allow the interpolation of such material either:

*John gave Chuck very frequently *akvavit*,
whereas this is possible with other non-term NPs, e.g.

John gave *akvavit* very frequently to Chuck.

This suggests that the demoted DO has not, in fact, become a *chômeur*. Heavy NP Shift allows for the final positioning of DOs when they are particularly lengthy. After Dative, it would therefore be expected that the promoted IO could undergo Heavy NP Shift, and

the demoted DO would become ineligible. However, the reverse is true, which again suggests that the demoted DO is not a typical *chômeur*. In Anderson (1977), further evidence from behaviour under passivization is adduced which also leads to the same conclusion.

Gary and Keenan (1977), in the process of arguing that in Kinyarwanda IOs are indistinct from DOs, argue that one of the most important reasons for allowing two instances of DO is that the semantic DO does not always lose its DO properties (1977, 108ff). Thus, when Locatives are promoted to DO, the former DO loses its properties, but when Instruments are promoted to DO, the DO is not demoted. This means that automatic demotion cannot be universally valid.

Sandra Chung, in her discussion of two passives in Indonesian (Chung, 1976), finds that the *chômeur* created by the operation of the non-canonical passive, which she calls 'object-preposing', does not behave totally like a *chômeur*; for instance it can control Equi NP Deletion at least marginally, although this is normally controlled only by subjects and DOs in Indonesian. Thus, yet again, the evidence points to at least a non-discrete hierarchy, in line with the suggestions above by Schachter and Kisseberth & Abasheikh: some *chômeurs* are more *chômeur*-like than others.

Lawler (1977) comes to similar conclusions when considering agreement data in Achenese. Agreement was originally assumed in the Relational framework to be controlled by terms, specifically by cyclic terms (i.e. those NPs which are terms on the cycle in question). However, in Achenese, after the operation of Passive, the verb continues to agree with the underlying subject which in other respects

behaves like a typical *chômeur*. He concludes that notions like 'term' and 'subject' are in fact non-discrete; that they are clusters of properties which an NP may have more or less of.

An argument for spontaneous demotion, i.e. against the hypothesis that demotion can only result from promotion is found in Comrie's discussion (1977) of impersonal passives, where he argues that nothing is promoted, although underlying S_{us} turn up as Oblique NPs, and the Su position is filled by a dummy. He considers data from several Germanic languages and Latin, where there is a dummy subject, but finds the clearest evidence in Welsh, where there is no dummy subject, and where the underlying DO fails to take on any subject-like properties.

As far as I know, (iii) has not been challenged: no evidence has been cited where a language demotes Su to DO or IO, for instance. However, (iii) and (iv) together have been challenged by data from Japanese in Shimizu (1975). In Japanese, passive applies not only to DOs, but also to IOs. IOs are apparently promoted directly up the hierarchy by Passive, since there is no evidence for an IO → DO promotion rule. However, possessors of DOs also appear to be promoted to Su. Shimizu argues that the most plausible derivation here is from a topicalization, which is then subjectivized by a rule topic → Su. This alters the 'termhood' of the topic NP; but topic is not on the hierarchy. At the same time, there is a rule Su → topic, so that if topic were included in the hierarchy (despite not being a grammatical relation as that is defined by the theory), then one or other of these rules would contravene (iii).

Sandra Chung's evidence on the two passives in Indonesian (Chung, 1976) also poses problems for (iv) since the most natural assumption

about the underlying motivation for such a law is that no language can have two rules which do the same promotion job. However, she shows that both the canonical passive and the 'object-preposing' construction in Indonesian do the same job of promoting an underlying DO to Su. (Both rules promote directly, which is presumably even less expected than one direct promotion route and one indirect.) She shows, however, that although the promotional effects of the two rules are the same, their demotional effects are different, and claims that it is this which makes their co-existence non-redundant.

Finally, (v) has been challenged in particular by Trithart's data from Chicewa (Trithart, 1975), a language which has rules promoting Specific Locative \rightarrow Su, General Locative \rightarrow Su, and DO \rightarrow Su, but no rule promoting directly IO \rightarrow Su. (There is an IO \rightarrow DO promotion rule, so that IOs can be promoted indirectly to Su.) This is counter to any strong form of (v), since the rules promoting the two kinds of Loc \rightarrow Su, and the DO promotion rule differ only in their side effects. However, he points out that this does not necessarily invalidate the weaker claim of the AH, where 'more accessible' can still be maintained: DOs are promoted by a single rule, IOs by two rules, and the Locs by different rules, each with more complex side effects than those for IO and DO. Nevertheless, it seems significant that only a sub-class of Locs can be promoted, and that (at least as far as the data presented allows judgement) other types of Obl NPs do not promote. Shimizu's data from Japanese discussed above is also somewhat problematic if it is true that possessor NPs subjectivize, while other types of Obl NPs fail to do so. Whether this is true cannot be decided on the basis of the data in his paper.

Relativization in Maori also poses problems for this law, see 4.3.

Thus it appears that most of the stronger claims of the RH are too strong, although the weaker ones of the AH are more easily supported. Schachter's, Lawler's, and Kisseberth & Abasheikh's claims, however, are also problematic for the AH. Nevertheless, despite the fact that there are problems associated with any strong proposals of a Relational nature, it appears that a number of interesting questions must be asked in order to give a Relational account of a language. In particular, it seems possible that Relational Grammar may assist in throwing a little light on such debated notions as subject and object in Maori, and it is to this end that the following discussion is directed.

4.1 Subject in Maori

As Gary and Keenan note (1977, 85),

It is a defect of all work on both the AH and the RH that no explicit, universal definition of the positions in the hierarchies has been given.

However, Keenan has attempted to rectify this in part, with a list of subject properties (Keenan, 1976). Unfortunately from the point of view of Maori, his definition of 'subject' demands as a prerequisite the identification of a set of 'basic sentences' for the language. This set undoubtedly includes intransitive sentences. However, although some criteria are given for the identification of such sentences, it is not clear for Maori whether, in particular, 'active' sentences or 'passive' sentences should be taken as basic. (Keenan himself noted (1976, 311) that this may be problematic in Maori.) The evidence, discussed in detail in 2.4.7, is indecisive. In

what follows, the subject properties of both passive and active sentences will be considered, and, as will emerge, there is a significant difference between them. Although arguably less basic, because less numerous, 'stative' sentences will also be investigated: they do not presuppose any other type of structure, one of Keenan's criteria. Verbless sentences, on the other hand, are not included, since it is not at all clear how Relational Grammar could include them as basic, since grammatical relations are defined in terms of a verb. In the following sections, each of the subject properties discussed by Keenan is considered in turn.

Johnson is very critical of Keenan's definition of 'subject of' (Johnson, 1977b), arguing that to treat Subject as a list of properties, not necessarily all found in all languages is not warranted. He claims that such a treatment is in fact a denial of the universality of 'Subject', and claims that the fact that Keenan failed to find a core of properties common to Subjects in all languages merely supports the idea that Subject is a primitive, and cannot be defined in terms of other notions (1977b, 680). However, he does concede that a list of properties of this kind might be used as a discovery procedure, and this is the use made of Keenan's properties here.

4.1.1 Independent Existence

Keenan postulates (1976, 312) that Subject NPs characteristically refer to entities whose existence is independent of the action expressed by the predicate. Consider firstly,

(4001) Ka hanga ngā ariki nei i ō rāua whare
 unspec build the(pl) chief here prep their(2,pl) house
 'These two chiefs built their houses'.

In the active, then, independent existence is characteristic of the \emptyset -marked NP as opposed to the i-marked NP. Compare:

- (4002) Ka hangā ō rāua whare e ngā ariki nei
 unspec build-pass. their(2,pl) house by the(pl) chief here
 'Their houses were built by these two chiefs'.

The NP existing independently of the action of the predicate is here the e-marked NP, while the \emptyset -marked phrase does not have independent existence. Thus in active sentences the \emptyset -marked NP has this property, while this is not so in passives. In general, the one obligatory NP in intransitives has independent existence, e.g.

- (4003) I oma te kau ki te whare miraka
 past run the cow to the house milk
 'The cow ran to the milking shed'.

However, with verbs such as tīmata 'start', this is not necessarily the case, e.g.

- (4004) Kua tīmata te waiata
 perf start the song
 'The song began', 'The singing began'.

Nevertheless, it seems that the \emptyset -marked NP characteristically has this Su property in intransitives. The majority of statives have \emptyset -marked NPs with this property. However, the following may be exceptions:

- (4005) Kua whānau te tamaiti a Hēni
 perf born the child of Jane
 'Jane's child has been born' (Ngata, 1964, 99)
- (4006) Kua reri te parakuihi
 perf ready the breakfast
 'Breakfast is ready'.

It appears thus that statives may also have subjects whose existence is not independent of the predicate. This is contrary, perhaps, to expectations: being in a state might be expected to presuppose the existence of the referent, or at least to presuppose their simultaneous existence. However, whānau and rerī appear to be rather isolated cases, since no other verbs in a list of over fifty statives appear to allow non-presupposed referents as subjects.

4.1.2 Indispensability

Keenan suggests (1976, 313) that subjects tend to be indispensable, whereas objects can under certain circumstances be dispensed with: consider English She writes (for a living). No construction of this kind exists in Maori, and it seems to me that the question of indispensability there is an extremely awkward one to assess, given the normality of contextual deletion of NPs. Thus the following are possible in texts:

(4007) Ka whakamārama a ia
 unspec cause-explain pers he
 'He explained'

with deleted i-phrase, and

(4008) Kātahi ka mirimiri i tana poho
 then unspec rub prep his(sg) chest
 'Then [he] rubbed his chest',

with deleted \emptyset -marked phrase (and note that pronominalization of an adnominal NP can still occur under these circumstances). In passives, the e-phrase (expressing the agent) can be deleted as in English:

- (4009) I whakaingoatia a ia mō te tīma Māori
 past cause-name-pass. pers he for the team Maori
 'He was selected for the Maori team'.

Contextually, however, it is also possible to have the \emptyset -marked NP absent (even with the e-phrase still present), as in

- (4010) Ka makaia ake e ia ki waho o te wai
 unspec throw-pass. up by he to the outside of the water
 '[It] was thrown up out of the water by him',

and, in fact, both NPs can be absent, as the second clause in the following shows:

- (4011) Ka utaina ngā tāngata o te poti pakaru
 unspec load-pass. the(pl) people of the boat broken
 nei ki runga i tētahi atu poti,
 here to the top at(adnom) a certain away boat
 ka whakahokia ki uta
 unspec cause-return-pass. to the shore
 'The people from this broken boat were loaded
 into another boat, [and] were returned to shore'.

It is not even necessary that the deleted NP should hold a consistent grammatical relation to the verb, as is shown by

- (4012) Ka haere te tamaiti rā, ka tae kei
 unspec move the child there unspec reach at(pres)
 tōna waka hua rewarewa, ka toroa ki te wai
 his(sg) canoe fruit rewarewa unspec push-pass. to the water
 'The boy went to his seed-pod canoe and pushed [it]
 into the water. (Orbell, 1968, 46, cited in Clark, 1973, 2),

where te tamaiti rā would be \emptyset -marked in the second clause, but e-marked

in the third, and tōna waka hua rewarewa is an OI NP in the second clause, but would be Ø-marked in the third. Such contextual deletions are not limited to passive examples, although the preponderance of passives in narrative makes attested examples with the non-passive rare.

Another factor which makes the indispensability criterion difficult to assess in Maori is that the natural translation of e.g.

He writes (for a living) is

(4013) Ka tuhi kōrero ia

unspec write talk he

'He writes'

or (4014) Ka tuhi kōrero tana mahi

unspec write talk his(sg) work

'His work is writing',

which involves a process which might be regarded as the incorporation of the object (kōrero) into the verb. Thus we cannot say that the object is dispensed with.

Biggs, however, argues (1974, 406) that

(4015) Ka patu te tangata

unspec kill the man

'The man kills'

is possible, whereas

(4016) *Ka patu i te kurī

unspec kill prep the dog

'Killed the dog'

is "incomplete", and that similarly,

(4017) Ka patua te kurī

unspec kill-pass. the dog

'The dog is killed'

is entirely acceptable, whereas the following is also incomplete:

- (4018) *Ka patua e te tangata
 unspec kill-pass. by the man
 'Was killed by the man'.

This is totally in accordance with the indispensability criterion: the unmarked NP in both actives and passives would have this subject property. However, there remain doubts about the "completeness" of e.g. (4015) out of context, and it seems to me that this criterion is one which must be treated with some suspicion as a clear identification for subjects in Maori. In passives, the only obligatory NP can be deleted in texts under co-reference, and this apparently extends to intransitives and statives. However, out of context, my informants were unwilling to accept sentences with obligatory NPs deleted.

Thus

- (4019) *I haere
 past move
 'Went'

- and (4020) *Kua riri
 perf angry
 'Was angry'

do not seem to be "complete" out of context; native informants are less happy about these than about (4015). Their subjects therefore appear to be indispensable.

4.1.3 Autonomous Reference

Keenan postulates also that (1976, 313) subjects have autonomous reference, and that they therefore can control other NPs under

reflexivization, but are not controllable. In active sentences in Maori, the \emptyset -marked NP controls reflexivization:

- (4021) Kāore i roa, ka tauwera anō a Pētera_i
 not at(past) long unspec towel again pers Peter_i
 i a ia_i (anō/ake)
 prep pers he_i self
 'It wasn't long before Peter dried himself again'.

(The use of anō or ake is optional, and serves to stress the reflexivization.) It is impossible for the i-phrase to control reflexivization:

- (4022) *Ka tauwera anō a ia_i i a Pētera_i (anō/ake)
 unspec towel again pers he_i prep pers Peter_i self
 'He_i dried Peter_i again'.

This is ungrammatical on a reading where ia and Pētera are co-referential, even if the NPs undergo Scrambling:

- (4023) *Ka tauwera i a Pētera_i a ia_i (anō/ake)
 unspec towel prep pers Peter_i pers he_i self
 'He_i dried Peter_i'.

With respect to passives, it appears that reflexivization is at best less acceptable than with actives. Thus

- (4024) I whakapaipaitia a Mere_i e ia_i anō/ake
 past cause-pretty-pass. pers Mary_i by she_i self
 'Mary was prettified by herself'

where reflexivization is controlled by the \emptyset -marked NP, requires anō/ake before it is acceptable. If Scrambling occurs, the result is ungrammatical:

- (4025) *I whakapaipaitia e ia_i a Mere_i anō/ake
 past cause-pretty-pass. by she_i pers Mary_i self
 'Mary was prettified by herself'.

Reflexivization cannot be controlled by the e-phrase with unmarked NP ordering:

- (4026) *I whakapaipaitia a ia_i e Mere_i anō/ake
 past cause-pretty-pass. pers she_i by Mary_i self
 'Mary was prettified by herself',

but with Scrambling, which produces L → R pronominalization, it is possible, but anō/ake is again compulsory:

- (4027) I whakapaipaitia e Mere_i a ia_i anō/ake
 past cause-pretty-pass. by Mary_i pers she_i self
 'Mary was prettified by herself'.

This can perhaps be used as an argument that active sentences are basic, since it is common cross-linguistically that some subject properties are not passed on to derived subjects, while it is highly unusual for derived subjects to have properties which non-derived subjects do not have. Here, the active does not require the emphasis to get a reflexive reading, whereas the passive does. However, either passive NP can control reflexivization, provided that L → R ordering occurs. This means that if either of these NPs is a *chômeur* (and in most respects the e-phrase is, as 4.1 will show), then it is atypical in retaining at least one subject property. (Further support on this point comes from Clark's paper (1973, 9), where he states that reflexives are always active, although my informant's judgements did not support this absolute restriction.)

Furthermore, the \emptyset -marked NP of statives can control reflexivization only if the emphatic anō/ake is added:

- (4028) Kua riri a Tamahae_i i a ia_i anō/ake
 perf angry pers Tamahae_i from pers he_i self
 'Tamahae was angry because of himself'.

Intransitives, of course, do not readily lend themselves to reflexivization, but the following example serves to illustrate the phenomenon:

- (4029) I waiata a Tamahae mōna anō
 past sing pers Tamahae about-he self
 'Tamahae sang about himself'.

Without anō, it is not clear whether the pronoun is reflexive or not: it could refer to some other person.

4.1.4 Co-referential Deletion in Co-ordination

Keenan also claims (1976, 315) that subjects are amongst the possible controllers of co-referential deletions across co-ordinate structures. In discussing this claim, it is necessary firstly to point out that the unmarked form of conjunction in Maori is simply the juxtaposition of two clauses, although there is a narrative co-ordinating conjunction, ā, which has a strong force of 'and then'. However, the rules for deletion appear to be the same whether the conjunction is present or not.

Ø-marked NPs of both active and passive sentences in Maori can control co-ordinate deletion:

- (4030) Ka kōrero a Hata_i ki a Tamahae, ā,
 unspec talk pers Hata_i to pers Tamahae and then
 ka haere (ia_i)
 unspec move he_i
 'Hata talked to Tamahae, and then (he) left'
- (4031) Ka kite a Pito, patua iho a Ttapu,
 unspec see pers Pito kill-pass. down pers Titapu
 tāpukea ai ki te tara o te whare
 bury-pass. pro to the wall of the house

'When Pito discovered this, [he] killed Titapu and buried [him] under the wall of the house' (Clark, 1973, 10).

The deletion in the third clause here is controlled by the \emptyset -marked NP of the passive patua. However, ai is left behind, and although it could be the ai of "dependent action", it could also be a pronominal copy. However,

- (4032) I tinihangatia a ia e tana iwi mō āna
 past cheat-pass. pers he by his(sg) tribe for his(pl)
 mahi mākutū, ka mauria ki Whakaari
 work magic unspec take-pass. to White Island
 'He was cheated by his tribe for his witchcraft, and
 was taken to White Island'

shows that the \emptyset -marked NP can undoubtedly control co-referential deletion. \emptyset -marked NPs of intransitive verbs control deletion readily:

- (4033) I taka atu tana kāmera ki te moana, kāore
 past fall away her(sg) camera to the sea not
 i kitea
 past see-pass.
 'Her camera fell into the sea, and was not seen again',

as do \emptyset -marked NPs of statives:

- (4034) I te iwa karaka, ka puta mai ētahi
 at(past) the nine o'clock unspec appear hither some(pl)
 o ngā kaimahi o Kaingaroa, ka kōrero, ka
 of the(pl) ag-work of Kaingaroa unspec talk unspec
 waiata, ka katakata
 sing unspec laugh
 'At nine o'clock, some of the workers of Kangaroo
 appeared, and talked, sang and laughed'.

This criterion, however, does not help distinguish subject NPs from other kinds of NP in Maori, since control of co-referential deletion is very widespread, extending to Oblique NPs (see example (4012) above, under 4.1.2, and example (4036) below).

It is also worthwhile considering what can be deleted, since Keenan claims (1976, 317) that this includes subjects. \emptyset -marked NPs of actives can be deleted readily:

- (4035) Ka rere atu a Tamahae ki te mThini a Pētera,
 unspec fast away pers Tamahae to the machine of Peter
 ka tTmata ki te kuti
 unspec start to the shear

'Tamahae hurried over to Peter's machine, and began to shear',

as can \emptyset -marked NPs in passives:

- (4036) Ka whāwhai atu taua kuia ki taua kai, ka kainga
 unspec reach away that old woman to that food unspec eat-pass.
 'The old woman reached for the food and ate [it]' (Clark,
 (1973, 10, with kuia for his tāua to avoid confusion
 with the determiner taua).

Similarly, \emptyset -marked NPs of intransitives can be deleted:

- (4037) I te kitenga atu a Tamahae i te pūru
 at(past) the look-nom away of Tamahae prep the bull
 rā e oma mai ana ki te tuki i a
 there pro- run hither -gress to the attack prep pers
 ia, ka huri a ia, ka oma
 he unspec turn pers he unspec run
 'When Tamahae saw the bull running to attack him, he
 turned and ran'.

It is impossible to show that passive e-phrases are deleted under such conditions, since they can be deleted whether or not conjoining has taken place. Ø-marked NPs in statives can also be deleted:

- (4038) Ka whakahoki a Pani ki Hawaiki, ā ka mate
 unspec cause-return pers Pani to Hawaiki and then unspec dead
 'Pani returned to Hawaiki, and eventually died'.

Thus all of the NPs under consideration behave in the same way with respect to co-ordination deletion.

4.1.5 Control of Verb Agreement

Subjects typically control verbal agreement in languages which have agreement phenomena. This criterion is, however, inapplicable to Maori, where there is no verb agreement.

4.1.6 Co-reference across Subordinate Clause Boundaries

Keenan also claims (1976, 316) that it is easiest to stipulate the co-reference of subject NPs across clause boundaries. In Maori, the discussion of this area is complicated by the fact that there are three common complementizers, kia, ki te and me, as well as non-introduced clauses, and these are all subject to different constraints. It is therefore necessary to examine each of these constructions separately. There are two points to consider: (i) "If reflexive (i.e. essentially anaphoric) pronouns in sentence complements of verbs of thinking can be bound by NPs in the matrix clause then these pronouns can always occur in subject position in the complement clause" and (ii) "NPs which can be co-referentially deleted in sentence complements when co-referential with matrix NPs always include subjects" (Keenan, 1976, 316).

4.1.6.1 Kia

The subject of an intransitive can be pronominalized under co-reference:

- (4039) Ka whakaaro a Hone_i kia haere a ia_i ki te toa
 unspec decide pers John_i comp move pers he_i to the store
 'John decided to go to the store'.

In passive complements, both the \emptyset -marked and the e-marked NPs can be pronominalized under identity:

- (4040) Ka whakaaro a Hone_i kia inumia e ia_i te wai
 unspec decide pers John_i comp drink-pass. by he_i the water
 'John decided to drink the water'

- (4041) Ka whakaaro a Hone_i kia akona a ia_i
 unspec decide pers John_i comp teach-pass. pers he_i
 e tōna tupuna
 by his(sg) grandfather
 'John decided to be taught by his grandfather'.

In active complements, the \emptyset -marked NP can be pronominalized, e.g.

- (4042) Ka whakaaro a Hone_i kia kōrero ia_i i te Paipera
 unspec decide pers John_i comp talk he_i prep the Bible
 'John decided to read the Bible',

and so, in fact, can the i-phrase, e.g.

- (4043) Ka whakaaro a Hone_i kia ako tōna tupuna
 unspec decide pers John_i comp teach his(sg) grandfather
 i a ia_i
 prep pers he_i
 'John decided that his grandfather should teach him'.

Examples with embedded statives are rare, but the following

- (4044) Ka whakaaro a Tamahae_i kia riri a ia_i ki
 unspec decide pers Tamahae_i comp angry pers he_i to
 te Pirimia
 the Prime Minister

'Tamahae decided to be angry with the Prime Minister' was judged possible, and the \emptyset -marked NP can thus be pronominalized. (Me was preferred here as the complementizer.)

In active complements, the \emptyset -marked NP can also be deleted:

- (4045) Ka pakeke haere a Māui, ka pTurangi kia
 unspec adult move pers Maui unspec want comp
 kite i ōna mātua
 see prep his(pl) parents

'Maui grew up and wanted to see his parents'.

However, examples of this last kind are somewhat rare, because ki te is required with canonical transitives under these circumstances. Kite 'see' is an experience verb, and these always require kia as their complementizer. However, examples with non-experience verbs are attested if the main clause verb is passive, e.g.

- (4046) E pTangitia ana au e rātou kia tono i
 pro- want-pass. -gress I by they(pl) comp order prep
 ngā tamariki ...
 the(pl) children

'They are wanting me to order the children ...'.

\emptyset -marked phrases of intransitives can also be deleted, e.g.

- (4047) Kua karangatia te manuhiri kia haere tika
 perf call-pass. the visitor comp move straight
 ki te whare kai
 to the house food

'The visitor has been called to go straight to the dining room',

and the controlling NP does not have to be \emptyset -marked itself, e.g.

- (4048) Ka karanga mai a Rāpata ki a au kia tū
 unspec call hither pers Rapata to pers I comp stand
 'Rapata called to me to stand'.

The Ø-marked NPs of passives are sometimes deletable, e.g.

- (4049) I karakia ia kia āwhinatia
 past pray he comp help-pass.
 'He prayed to be helped',

though this is less common. It is impossible to decide whether e-phrases are deleted by this process or by the fact that they are dispensable.

Despite a wide data base, no relevant examples with a stative in the subordinate clause were found, and attempts to elicit the necessary data were consistently met by using alternative means of expression.

Thus it must be concluded that with kia all these Ø-marked NPs exhibit behaviour typical of subjects.

4.1.6.2 Ki te

This type of complementation involves obligatory deletion of the Ø-marked NP of the complement. The complement may be intransitive:

- (4050) Ka hiahia aua tamariki ki te haere a te Tūrei
 unspec want those children to the move at(fut) the Tuesday
 'The children want to go on Tuesday',

or transitive:

- (4051) Ka tonoa e ia ngā hēpara ki te whiu
 unspec order-pass. by he the(pl) shepherd to the chase
 mai i ngā hipi ki te wūruheti
 hither prep the(pl) sheep to the woolshed
 'The shepherds were sent by him to fetch the sheep
 to the woolshed'.

Again, embedded statives are rare, and somewhat doubtful, but the following was accepted:

- (4052) Ka hiahia ia ki te riri
 unspec want he to the angry
 'He wanted to be angry',

but other verbs such as mate 'die' were usually judged doubtful or unacceptable here. Note that complementation with ki te involves obligatory deletion of the co-referential NP, whereas with kia pronominalization is commoner. However, there is another important difference between the complementizers: it is impossible to embed passive complements under ki te. Thus the following are ungrammatical:

- (4053) *Ka pTrangi ia ki te āwhinatia e ngā tamariki
 unspec want he to the help-pass. by the(pl) children
 'He wanted to be helped by the children'
- (4054) *Ka tonoa ngā hēpara ki te whiua e Hata
 unspec order-pass. the(pl) shepherd to the punish-pass. by Hata
 'The shepherds were ordered to be punished by Hata'.

These facts could be used to argue for the non-basiness of the passive.

4.1.6.3 Me

The data obtainable for me fails to clarify the position, since the vast majority of instances have different subjects in the two clauses. However, deletion of the \emptyset -marked NP of an intransitive can occur, e.g.

- (4055) Ka whakahau au me haere mā te one
 unspec order I should move via the beach
 'I ordered that we must go via the beach'
- (4056) Whakaae katoa ana me haere ki Whakaari
 agree all narr. should move to White Island
 'They all agreed that they should go to White Island'.

In addition, pronominalization can occur, at least co-referentially with another pronoun, e.g.

- (4057) E mōhio ana ahau me ako ahau ki te whaikōrero
 pro- know -gress I should learn I to the recite
 ki te whakapapa
 to the genealogies
 'I know I should learn to recite genealogies'.

Here the pronominalized NP is the \emptyset -marked NP of an active clause. Thus what evidence there is supports \emptyset -marked NPs as subjects, but the evidence is rather scanty.

4.1.6.4 Non-introduced Clauses

These retain their tense/aspect markers, and are juxtaposed to the main clause. Pronominalization of \emptyset -marked NPs occurs with statives, e.g.

- (4058) E whakapono ana a ia mehemea ki te inoi ia
 pro- believe -gress pers he if to the pray he
 ki Te Atua, ka ora ia
 to the Lord unspec well he
 'He believes that if he prays to the Lord, he will be cured'.

It seems unlikely that it is restricted to statives, although no other examples appear in the corpus. No deletions were found, and it seems unlikely that they occur.

4.1.6.5 Summary

Where the evidence is complete, all \emptyset -marked NPs exhibit typical subject behaviour, although the impossibility of embedding passives under ki te

suggests that the \emptyset -marked NPs here are less subject-like than the others considered. Where the evidence is incomplete, (because of the difficulty of obtaining crucial data) none of the examples point to unexpected subject behaviour.

4.1.7 Verb Serialization Deletion

It is not entirely clear to me whether this phenomenon is in fact covered above by co-ordination without a conjunction marker, or whether it does not exist in Maori, or whether it occurs in the phenomenon illustrated in

(4059) E tangi haere mai ana te ope
 pro- cry move hither -gress the group

'The group were going along crying',

where te ope is the notional subject of both verbs. However, since the verbs (tangi, haere) occur with one e ... ana marker, rather than with one each, it is possibly unjustifiable to regard this as two verbs, rather than as a complex one. However, it is clear that if the phenomenon does exist, then it applies at least to the \emptyset -marked NPs with intransitive verbs. The construction is not particularly common except with haere, and no examples with active, passive or stative verbs were found or elicited.

4.1.8 Absolute Reference

Keenan postulates (1976, 317) that subject NPs are much more likely to presuppose the existence of the entity they refer to, even if it is indefinite, than are non-subjects. The facts in this area seem rather difficult to ascertain with clarity for Maori, because of complications in the marking of the distinction between definite and indefinite.

The marker he (see 2.2.3.3) which is described as the "indefinite article" by most writers on Maori (e.g. Biggs, 1969, 20; Hohepa, 1967, 23; but not Williams) cannot appear after the prepositions ki, i, hei, kei (see e.g. Biggs, 1969, 113), though Williams says that it cannot occur after any preposition (Williams, 1862, 21). It is not at all clear whether this constraint is purely phonologically conditioned, or whether it is semantically conditioned: it might be argued that all four prepositions have a basic locative sense, and, since a definite location usually implies a definite object, the constraint might thus have a semantic basis. After the four prepositions listed above, the forms tētahi and ētahi appear, and are usually translated as '(a) certain' - i.e. these forms are [-definite][+specific]. Obviously, then, if he is truly indefinite, its occurrence as subject ought to be comparatively rare on Keenan's prediction; on the other hand, it is impossible to compare its occurrence in subject position with its occurrence in object position, because he cannot follow either of the potential DO markers, i and ki. However, the occurrence of e.g.

(4060) He pere kei runga i te tēpu
 a bell at(pres) the top at(adnom) the table
 'There is a bell on the table'

suggests that he can also, like tētahi, be [-definite][+specific]. Thus the distinctions we are dealing with here are not entirely clear. However, the following data illustrate the attested environments of he and (t)ētahi.

4.1.8.1 He

In stative sentences, it occurs on the Ø-marked NP, which is preposed in the following example (existence of the referent is clearly

presupposed in the context):

- (4061) He rākau anake i mau i a koe
 a stick alone past caught from pers you(sg)
 'A stick was all you caught'.

In passive sentences, he is found in the \emptyset -marked NP:

- (4062) Ka haere ngā tāne ki te ngāhere, ka mauria
 unspec move the(pl) men to the bush unspec take-pass.
 he kai
 a food
 'When the men go to the bush, they take food (with them)'.

Again, the existence of the referent appears to be presupposed. Similarly,

- (4063) I reira, ka kitea e ia he pounamu
 at(past) there unspec see-pass. by he a greenstone
 i Arahura
 at(neut) Arahura
 'There, he saw some greenstone at Arahura'.

Tētahi here would imply a particular piece of greenstone. However, presupposition is not always the case, at least with the \emptyset -marked NP of an imperative whose verb is passive:

- (4064) Whakairotia he kēti whakamaharatanga
 cause-carve-pass. a gate cause-warm-nom
 'Carve a memorial gate!'

Tētahi is also possible here, and informants had difficulty in assessing their equivalence. He does not occur in the e-phrase of passives, e.g.

- (4065) *Kua patua ia e he tangata
 perf kill-pass. he by a man
 'He was killed by a man',

and is doubtful in transitives, e.g.

- (4066) ?Kua patu he tangata i a ia
 perf kill a man prep pers he
 'A man killed him',

but is possible in intransitives, e.g.

- (4067) Kua haere atu he tangata
 perf move away a man
 'A man went away'.

It occurs in what must be regarded as Subjects in negative sentences (see 2.4.4), e.g.

- (4068) Kāore he tangata e noho ana i runga i
 not a man pro- stay -gress at(past) the top at(adnom)
 tēnei moutere ināianeī
 this island nowadays
 'Nobody lives on this island nowadays'.

If the chief distinction between he and tētahi lies in the non-specific reference of he, then again it would appear that this might count as evidence for the derived nature of the Maori passive, since he occurs more readily in the Ø-marked NPs of passives than in actives. However, this is somewhat problematic, since he appears to be excluded from the i-phrases of transitives.

4.1.8.2 Tētahi and ētahi

These have a wider range of occurrence:

In stative sentences, in the Ø-marked NP, e.g.

- (4069) Kua mau i a Tamahae tētahi ika paku
 perf caught from pers Tamahae a certain fish small
 'A small fish has been caught because of Tamahae';

In passive sentences, in the \emptyset -marked NP:

- (4070) Kua kainga e Mere tētahi kōura
 perf eat-pass. by Mary a certain crayfish
 'Mary has eaten some crayfish';

In passive sentences, in the e-marked NP:

- (4071) I pāngia ia e tētahi mate kino
 past touch-pass. he by a certain illness bad
 'He was smitten by a terrible disease';

In intransitive sentences:

- (4072) Kua kanikani ētahi o ngā tāngata
 perf dance certain of the(pl) people
 'Some of the people have started dancing';

In transitive sentences, in the \emptyset -marked NP:

- (4073) Kei te karanga tētahi o te tīma, "..."
 at(pres) the call a certain of the team
 'One of the team is calling out, "...";

In transitive sentences, in the i-marked NP:

- (4074) Kua kite a Mere i tētahi mea pai
 perf see pers Mary prep a certain thing good
 'Mary has seen something nice';

It also occurs in some Oblique NP constituents, e.g.

- (4075) I haere ia ki tētahi kura i Ākarana
 past move he to a certain school at(neut) Auckland
 'He went to a school in Auckland'.

Thus it appears that NPs with clearly non-presupposed reference are to a large extent restricted from occurrence in Subject position, the exception being in intransitives and in passives (which are intransitive).

The data above also suggests that they are equally restricted from occurrence in D0 position. However, the construction involving object incorporation appears to be used under circumstances where indefinite reference is intended in the D0, e.g.

- (4076) Kei te haere ia ki te whakangau poaka
 at(pres) the move he to the cause-bite pig
 'He is going to hunt pigs'.

However, this construction is not limited to reference where existence is not presupposed, as is shown by

- (4077) Kei te hoko rare anō a Tamahae
 at(pres) the buy sweet again pers Tamahae
 'Tamahae is buying lollies again'.

Nevertheless, it appears that as far as it is possible to ascertain, the property of absolute reference is found in Maori in \emptyset -marked NPs of transitive sentences more than in other types of NP. It is perhaps surprising, however, that intransitive sentences behave differently with respect to this property, and this suggests that not too much weight can be attached to these results. Note that 'weather' sentences in Maori have NPs marked as definite, and thus do not provide the problems for this property that they provide in some Indo-European languages.

Thus

- (4078) Kei te heke te ua
 at(pres) the fall the rain
 'It is raining'
- (4079) Kei te pupuhi te hau
 at(pres) the blow the wind
 'It is blowing'.

4.1.9 Retention of Presupposed Reference

Keenan notes (1976, 318) that under negation and questioning, the presupposed reference of NPs is sometimes suspended, but he also notes that subjects lose this property less readily than other NPs. The Maori sentences equivalent to those used by Keenan as illustrations of this are non-verbal and therefore cannot readily be used to illustrate this property in Maori. It has been shown that NPs with he appear in negatives, as in (4068), repeated here for convenience:

- (4068) Kāore he tangata e noho ana i runga i
 not a man pro- stay -gress at(past) the top at(adnom)
 tēnei mouere ināianeī
 this island nowadays
 'Nobody lives on this island nowadays',

in which the existential implication of

- (4080) E noho ana te tāngata i runga i
 pro- stay -gress the men at(past) the top at(adnom)
 tēnei mouere ināianeī
 this island nowadays
 'People live on this island nowadays'

is not preserved. However, this is by no means the rule:

- (4081) Kāore te kēhua e mahi ana i te awatea
 not the ghost pro- work -gress at(neut) the daytime
 'Ghosts don't operate in daylight'

still appears to preserve the existential implication. It is not essential to have an indefinite NP to get the implication suppressed; consider:

- (4082) Kāore te wahine e pTrangi atu ki a Hukarere
 not the woman non-pt want away to pers Hukarere
 'No woman would want Hukarere'.

However, it appears that in the majority of cases, the presupposition is preserved. This is also true when passives are negated:

- (4083) Kāore te tangata i kōhehetia e Pani
 not the man past scold-pass. by Pani
 'The man was not scolded by Pani'.

However, it appears that (4082) and (4083) are ambiguous between an indefinite and a definite reading, i.e. that (4082) might also mean 'The woman does not want Hukarere', where the existential implication is preserved, and (4083) might also mean 'No men were scolded by Pani', where the existential implication is not preserved. Both these examples could have he in the \emptyset -marked NP, when the reading would have to be indefinite, and it seems likely that this is the form used when context would not make clear which of the two readings with te was appropriate. It is not clear to me whether this ambiguity is systematic. Whatever the case, it would appear that these \emptyset -marked NPs certainly do not necessarily lose their presupposed reference under negation.

Questioning of the kind involved here is done in Maori by the use of question intonation with the declarative sentence structure, and as far as I was able to ascertain, the implications found in the corresponding declaratives are not altered. However, this proved a difficult area to elicit judgements about, and a categorical answer to the question is not possible.

4.1.10 Metaphoric Idioms

Keenan claims (1976, 318) that if any NP in an idiom of this kind has its literal reference, it is the Subject NP, and that if the Subject NP loses its literal reference, then all other NPs also lose theirs.

Of those metaphoric idioms of Maori known to me, the great majority involve non-verbal sentences, and consequently, the data available to me are extremely limited. However, the following appears to pose problems for this property:

- (4084) Nāu te rourou, nāku te rourou, ka ora
 by you the flax basket by me the flax basket unspec well
 te manuhiri; nāu te rākau, nāku te rākau, ka
 the visitor by you the stick by me the stick unspec
 mate te hoariri
 dead the enemy
 'A flax basket by you, a flax basket by me, the visitor
 thrives; a stick from you, a stick from me, the enemy
 is killed'.

Here, the subjects of the stative clauses, te manuhiri and te hoariri, need not have their literal reference, and te rourou and te rākau are also unlikely to be literally referential (they are the \emptyset -marked NPs in the verbless clauses). However, nāu and nāku have personal pronouns cliticized to the preposition nā, and these are most usually literally referential, since the whole idiom urges co-operation. Thus it would appear that Keenan's claim is not supported for the \emptyset -marked NPs in statives. While there certainly exist idioms with Subject NPs which are not literally referential, e.g.

- (4085) Ka pū te ruha, ka hao te rangatahi
 unspec cast aside the old net unspec fish the new net
 'The old net is cast aside, while the new net goes fishing'

(used e.g. to imply that the old step aside for the young), or

- (4086) Mate atu he tētēkura, ara mai he tētēkura
 dead away a frond emerge hither a frond
 'As one frond dies off, another emerges to take its place',

none of these examples contains any non-Subject NPs, and they thus do not provide strong evidence in either direction.

4.1.11 Topic

Keenan also proposes (1976, 318) that subjects express most frequently what the speaker is talking about. To examine this property, two short pieces of narrative will be analysed. The first is a description of a whaling trip (potential subjects in main clauses are underlined):

- (4087) Nā, me hoki āku kōrero ki tētahi haerenga
 well should return my(pl) talk to a certain go-nom
 o mātou ki te whai i tētahi tohorā. Nō
 of we(excl,pl) to the hunt prep a certain whale at
 te kōtahi karaka i te ahiahi, ka kitea
 the one o'clock at(neut) the afternoon unspec see-pass.
 atu te tohorā e paute haere ana i te
 away the whale pro- spout move -gress at(neut) the
 moana, i waho tonu atu o Maungaroa.
 sea at(neut) the outside still away of Maungaroa
 Tere tonu te whakaturia o te haki o Maungaroa.
 fast indeed the cause-stand-pass. of the flag of Maungaroa.
 Ka kite mai ngā kaititiro o Te Kaha, ka
 unspec see hither the(pl) ag-watch of Te Kaha unspec
 whakatūria hoki tā rātou. Ka kite mai hoki
 cause-stand-pass. also theirs(pl) unspec see hither also
ngā mea o Ōmāio i te haki o Te Kaha, ka
 the(pl) thing of Ōmaio prep the flag of Te Kaha unspec

pērā anō rātou. Kāore i roa, ka puta
 likewise again they(pl) not past long unspec appear
ngā poti ki te moana, ka ahu pērā ki Maungaroa.
 the(pl) boat to the sea unspec move likewise to Maungaroa
 I te toru karaka, ka tata ngā poti o Te Kaha
 at(past) the three o'clock unspec near the(pl) boat of Te Kaha
me Maungaroa ki te wāhi e kau ana te ika rā
 with Maungaroa to the place pro- swim -gress the fish there
 'Well, my story had better return to one of our whale-
 hunting trips. At one o'clock in the afternoon, the
 whale was seen going along spouting in the sea just
 off Maungaroa. Maungaroa's flag was speedily hoisted.
 The look-out men at Te Kaha saw it, and also hoisted
 theirs. The ones at Omaio also saw the Te Kaha
 flag, and they did the same. Before long, the
 boats appeared in the sea, all moving towards Maungaroa.
 At three o'clock, the Te Kaha and Maungaroa boats neared
 the spot where the whale was swimming'.

From this it will be seen that in general either all the information in the NPs is new, or the old information is located in the \emptyset -marked NPs. (Note that not all these sentences are 'basic' in Keenan's sense.) It is never the case here that old information occurs in a marked NP while new information appears in a \emptyset -marked NP.

As a second example, not written for learning purposes, consider the following extract (deleted NPs are indicated by an underlining):

(4088) Ko te kōrero pakiwaitara tēnei mō Rona. He tupuna
 eq the story fiction this about Rona a ancestor

nō tātou a Rona, nō nehe noa
 belong we(incl,pl) pers Rona belong ancient times long
 atu. I tētahi pō atarau ka haere
 away at(past) a certain night moonlit unspec move
 a Rona ki te tiki wai mō ana tamariki, ko
 pers Rona to the fetch water for her(pl) children top.
 te kete ki tētahi ringa mau ai, ko te tahā
 the basket to a certain hand carry pro top. the calabash
 ki tētahi ringa. I te haerenga atu ki te
 to a certain hand at(past) the move-nom away to the
 wai ka āraia te marama e te kapua. He
 water unspec hide-pass. the moon by the cloud cls
 ara kino taua ara i haere ai ā, ka tūtuki
 path bad that path past move pro and then unspec stumble
 tana waewae ki ngā pakiaka o ngā rākau i
 her(sg) foot to the(pl) root of the(pl) tree at(neut)
 taua ara. Ā ka riri ia, ka kanga
 that path and then unspec angry she unspec curse
 ki te marama; ka puta ana kupu, ka mea
 to the moon unspec appear her(pl) word unspec say
 ___, "Pokokohua koe e te marama, tē puta mai
 swine you(sg) voc the moon not appear hither
 koe kia marama ai." Ka riri anō hoki
 you(sg) comp light pro unspec angry indeed indeed
 te marama ki aua kupu a Rona, ā, ka rere
 the moon to those word of Rona and then unspec reach
 ___ iho, ka mau ___ ki a Rona.
 down unspec seize to pers Rona

'This is the legend of Rona. Rona is one of our ancestors from the distant past. One moonlit night, Rona went to fetch water for her children, carrying a basket in one hand and a calabash in the other. When she set off to get the water, the moon was hidden by cloud. The path she went along was a rough one, and so her foot stumbled against the roots of the trees on the path. Then she was angry; she cursed the moon; her words were these: "You swine, moon, for not appearing so that it will be light." The moon was very angry indeed at these words of Rona's, so it reached down and seized Rona'.

As can be seen, the same distribution of information is found in uncontrived narrative, i.e. it is never the case that the \emptyset -marked NP has new information, while some other NP has old information. Notice also that NP deletion depends crucially on the notion topic in the sense 'what we are talking about', and accounts for the large number of \emptyset -marked NP deletions. It is predictable in texts that deletion of other than \emptyset -marked NPs depends on the \emptyset -marked NP also being deleted.

However, the fronting of NPs with ko appears to pose some problems for the hypothesis under discussion here, in that this fronting process works primarily on \emptyset -marked NPs, and only on definite NPs, but it does not always seem to indicate topic in the sense of 'what we are talking about' (see 2.4.6). The informants I consulted consistently chose an English translation of the form 'It is X who/that ...' when presented with a list of English translations representing a wide variety of information structures. Halliday (1967, 236) has discussed these

English structures in some detail, calling them equative, with an identified (It ___ who ...) and an identifier (X). He continues,

Structurally, predication maps the function of identifier on to that of theme, giving explicit prominence to the theme by exclusion

and adds that in predication, the prominence is thematic: 'X and nobody else is the topic of the sentence'. Later he adds (p.237) "Thematic prominence is a form of 'new' information". These remarks seem entirely applicable to many instances of ko in Maori: ko appears to be used on just those occasions when the \emptyset -marked NP contains new information, e.g.

(4089) Ko Rāpata te kāpene o tō mātou poti. I
 eq Rapata the captain of our(excl,pl) boat at(past)
 te kei ia e noho ana. Ko au i te ihu
 the stern he pro- sit -gress top. I at(past) the nose
 'Rapata was the captain of our boat. He was sitting
 in the stern. I was at the prow'.

This involves ko in non-verbal structures, but shows that the location is "given"; the new information is the location of au in comparison with the previous topic, Rāpata. However, matters are not so simple, as is shown by

(4090) ... Ka karanga au "Pāhi!" Ko tēnei kupu i
 unspec call I pass top. this word past
 tangohia mai i te reo Ingarihi, arā, "pass!"
 take-pass. hither from the language English i.e. pass
 'I shouted "Pāhi!" This word has been borrowed from
 the English language, i.e. pass'.

Here, the word pāhi is already given when it appears in the ko-structure.

Thus ko-fronting appears to have two distinct and contradictory functions, which complicates any description of topic in Maori. However, such sentences are non-basic, and thus need not constitute problems in connection with 'subject as topic in basic sentences', although they undoubtedly do in a wider perspective. (Indeed, ko-structures point very clearly to a need for a much more thorough analysis of notions such as topic, since it is highly unlikely that it can realize two such contradictory functions.)

4.1.12 Highly Referential NPs

Keenan claims (1976, 319) that "highly referential" NPs, e.g. personal pronouns, Proper Nouns and demonstratives can occur as Su, and as a corollary to this, that if an NP position cannot be filled by a definite NP, it cannot be a subject, whilst if it cannot be filled by an indefinite NP, that is evidence that it is a subject. As shown above (4.1.5), with respect to the types of NP we are considering here, definiteness and indefiniteness are not exclusive. To recapitulate: (t)ētahi occurs in all the NP positions we are interested in, but he does not occur in the Su or DO of transitive sentences, nor in e-phrases in passives. Mark (1970) discusses the restrictions on he, and finds that certain verbs, e.g. hopu 'catch' and mōhio 'know' behave like intransitives, in allowing he, but my informants rejected these. It thus appears that the restriction as stated above is correct. The restriction rules out both \emptyset -marked NPs of transitives, and i-marked NPs, as well as e-marked passive NPs, and thus does not select a Su NP in transitive sentences, whereas it selects as Su \emptyset -marked NPs in intransitives, including passives. It would thus appear to be a restriction deriving from some source other than NP function.

With respect to personal pronouns, we find that they can occur

in all the relevant NP positions (as well as most others):

In intransitives, on the \emptyset -marked NP:

- (4091) E whāwhai ana au ki te kāinga
 pro- hurry -gress I to the home
 'I'm hurrying home';

In passives, on the \emptyset -marked NP:

- (4092) Kei te whāia ia e Pita
 at(pres) the chase-pass. he by Peter
 'He's being chased by Peter';

In passives, on the e-phrase:

- (4093) I reira, ka kitea e ia tētahi pounamu
 at(past) there unspec see-pass. by he a certain greenstone
 'There he saw some greenstone';

In actives, on the \emptyset -marked NP:

- (4094) Ka patu ia i te taniwha
 unspec kill he prep the taniwha
 'He killed the taniwha';

In statives, on the \emptyset -marked NP:

- (4095) Kua mau ia i te marama
 perf caught she from the moon
 'She has been caught because of the moon'.

A similar pattern emerges for Proper Nouns:

In intransitives, on \emptyset -marked NPs:

- (4096) Kua kuhu a Tamahae ki roto i te whare
 perf enter pers Tamahae to the inside at(adnom) the house
 'Tamahae has gone into the house';

In passives, on \emptyset -marked NPs:

- (4097) Kua whāia a Tamahae e te pūru
 perf chase-pass. pers Tamahae by the bull
 'Tamahae is being chased by the bull';

In passives, on the e-phrase:

- (4098) Ka patua te pūru e Hata
 unspec kill-pass. the bull by Hata
 'The bull was killed by Hata';

In actives, on Ø-marked NPs:

- (4099) Kei te whāngai a Rewi i ngā kau
 at(pres) the feed pers Rewi prep the(pl) cow
 'Rewi is feeding the cows';

In statives, on the Ø-marked NPs:

- (4100) Kua mau a Rona i te marama
 perf caught pers Rona from the moon
 'Rona was caught by the moon'.

With demonstratives, exactly the same pattern occurs:

In intransitives, on the Ø-marked NP:

- (4101) Ka toromi te tipuna nei, a Rongomai
 unspec drown the ancestor here pers Rongomai
 'This ancestor, Rongomai, drowned';

In passives, on Ø-marked NPs:

- (4102) Ka titia ngā kura nā ki tōna tīpare
 unspec poke-pass. the(pl) feather there to his(sg) headband
 'Those feathers were poked into his headband';

In passives, on e-phrases:

- (4103) Ka whāia a Tamahae e te pūru nei
 unspec chase-pass. pers Tamahae by the bull here
 'This bull chased Tamahae';

In actives, on Ø-marked NPs:

- (4104) Kei te waiata ngā tāngata rā i a
 at(pres) the sing the(pl) people there pres pers
 "Me he manu rere"
 if cls bird fly
 'Those people are singing "If I was a bird";

In statives, on Ø-marked NPs:

- (4105) Kua reri te tamaiti nei
 perf ready the child here
 'This boy is ready'.

Thus there is no evidence forthcoming from the distribution of these three types of NP which can assist with the identification of the Su NP in those sentence types where it is in question.

4.1.13 Advancement Transformations

Keenan claims (1976, 319) that if a language has advancement transformations, NPs will be able to advance to Su, but not necessarily to any other position. Maori is not rich in advancement transformations; in fact it appears that Passive is the only clear candidate for this. If active sentences are basic, then passive promotes an underlying DO to Su in a fashion not unlike English. Thus from

- (4106) Kua whai te pūru i a Tamahae
 perf chase the bull prep pers Tamahae
 'The bull chased Tamahae'

we can derive by Passive

- (4107) Kua whāia a Tamahae e te pūru
 perf chase-pass. pers Tamahae by the bull
 'Tamahae was chased by the bull',

with introduction of passive verb morphology, and the introduction of e as demoted Su marker. However, if passives are basic, then actives would presumably be derived by an advancement transformation:

- (4108) Kua patua te pūru e Hata
 perf kill-pass. the bull by Hata
 'The bull was killed by Hata'

would be transformed by Active into

- (4109) Kua patu a Hata i te pūru
 perf kill pers Hata prep the bull
 'Hata killed the bull',

with the derived subject taking on zero-marking and immediate post-verbal position, and the demoted Su taking the Oblique case marker i, while the verb takes on special morphology (essentially loses a suffix). Thus either view of the basic-sentence problem allows for advancement to Su, and it appears that no advancements to other positions exist. This takes for granted, of course, that \emptyset -marking identifies Su.

However, it should be mentioned at this point that there is one further construction which might be regarded as 'advancement to subject', and that is the mā/nā actor-emphatic construction, e.g.

- (4110) Mā Tamahae e horoi ngā paepae kai
 by Tamahae non-pt clean the(pl) container food
 'It is Tamahae who will clean the plates'.

There is considerable disagreement about the grammatical relations in such sentences (see 2.4.8 and 4.2). If, however, (4110) is derived from

- (4111) Ka horoi a Tamahae i ngā paepae kai
 unspec clean pers Tamahae prep the(pl) container food
 'Tamahae will clean the plates',

then this process constitutes advancement to subject of the NP ngā paepae kai, with the appearance of the former Su in an Oblique NP. There is, however, no overt marking of this in the verb morphology. Nothing further will be said at this juncture about the problems inherent in this analysis, nor of other possible analyses.

4.1.14 Scope

Keenan posits (1976, 319) that Su NPs have wider scope than other types of NP. This involves judgements about the grammaticality (or interpretation) of e.g.

(4112) I whakamatea he tangata e te katoa o ngā tohunga
 past cause-dead-pass. a man by the all of the(pl) tohunga
 'A man was killed by all the tohungas'

(4113) ?Kua whakamate ngā tohunga katoa i tētahi tangata
 perf cause-dead the(pl) tohunga all prep a certain man
 'All the tohungas killed a man'.

Note that the restrictions on the occurrence of he make it extremely difficult to discover the properties of NPs in Maori with respect to quantifier scope, since he and katoa appear to be the only quantifiers whose syntactic expression is in any way equivalent to that of corresponding English examples. Note, for example, the following:

(4114) Me hongī koe ki tēnā tangata, ki tēnā tangata
 should press noses you(sg) to that man to that man
 'You must press noses with each person'.

It appears that both (4112) and (4113) have the same interpretation, (but note that (4113) is doubtfully acceptable), that is, that only one man was involved, the normal expression of the alternative being:

- (4115) Kua whakamate ia tohunga i tana tangata
 perf cause-dead each tohunga prep his(sg) man
 'All the tohungas killed a man'.

Thus the scope properties support the \emptyset -marked NP as Su in the passive, but it appears that, because of the restrictions on he, and the doubtfulness of (4113), it is impossible to obtain information about the NPs in transitive sentences from a consideration of scope.

4.1.15 Position

Keenan also posits (1976, 319) that basic subjects are normally the leftmost occurring NPs in basic sentences. This argues that in Maori the \emptyset -marked NPs are subjects in all of the following:

Intransitive:

- (4116) Ka haere a Rewi ki te whare
 unspec move pers Rewi to the house
 'Rewi went to the house';

Active transitive:

- (4117) Kei te patu a Rewi i te poaka
 at(pres) the kill pers Rewi prep the pig
 'Rewi is killing the pig'

Passive:

- (4118) Kua patua te poaka e Rewi
 perf kill-pass. the pig by Rewi
 'The pig has been killed by Rewi'

Stative:

- (4119) Kua riri a Hata i a Tamahae
 perf angry pers Hata from pers Tamahae
 'Hata has got angry because of Tamahae'

In all cases, other NP orderings occur, but there seems no question that the above is the unmarked order for each type, other orders being occasioned by Heavy NP Shift, fronting over the verb, etc. This criterion does not, therefore, show any differentiation of active from passive subjects.

4.1.16 Relativization

Relativization is a very complex phenomenon in Maori, and appears to pose some important problems for any type of relational grammar; it will accordingly be treated in considerable detail in a later section (see 4.3 below). Here, we will simply mention those characteristics related to establishing the claim (Keenan, 1976, 320) that NPs which can be relativized include subjects. Unmarked NPs in intransitives:

- (4120) Ko Mātaatua tētahi anō o ngā waka i
 eq Mataatua a certain again of the(pl) canoe past
 ū ki koneki i ngā rā o mua
 land to here at(neut) the(pl) day of before
 'Mataatua is another of the canoes which landed here
 in former days'.

The two source sentences posited are

- (4121) (a) Ko Mātaatua tētahi anō o ngā waka
 eq Mataatua a certain again of the(pl) canoe
 'Mataatua is one of the canoes'
- (b) I ū ngā waka ki koneki i
 past land the(pl) canoe to here at(neut)
 ngā rā o mua
 the(pl) day of before
 'The canoes landed here in former days'.

Relativization here thus involves the juxtaposition of the relative S and the head NP in the host S; the co-referential NP is deleted from the relative S, and there is no pronominalization.

The same process applies to \emptyset -marked NPs from active sentences, thus:

- (4122) Ko taku mahi he whakaako i ngā
 top. my(sg) work cls cause-learn prep the(pl)
 tāngata e pīrangī ana ki te ako i
 people pro- want -gress to the learn prep
 te reo Māori
 the language Maori
 'My job is teaching the people who want to learn Maori'

is derived from

- (4123) (a) Ko taku mahi he whakaako i ngā
 top. my(sg) work cls cause-learn prep the(pl)
 tāngata
 people
 'My job is teaching the people'
- (b) E pīrangī ana ngā tāngata ki te ako
 pro- want -gress the(pl) people to the learn
 i te reo Māori
 prep the language Maori
 'The people want to learn Maori',

where ngā tāngata is deleted from (4123)(b), and the resultant relative structure is placed beside the co-referential NP in the host sentence.

The same process produces relatives from the \emptyset -marked NP of a passive S, thus:

- (4124) Kōtahi te poaka e pūhia ana a te Mane
 one the pig pro- shoot-pass. -gress at(fut) the Monday
 '[There is] one pig [that] will be shot on Monday'

is derived from

- (4125) (a) Kōtahi te poaka
 one the pig
 '[There is] one pig'
- (b) E pūhia ana te poaka a te Mane
 pro- shoot-pass. -gress the pig at(fut) the Monday
 'The pig will be being shot on Monday'.

Similarly, the same strategy is used for relativizing the \emptyset -marked NPs of statives:

- (4126) I kite a Hata i te tuna i mau i a Rewi
 past see pers Hata prep the eel past caught from pers Rewi
 'Hata saw the eel that Rewi caught'

is derived from

- (4127) (a) I kite a Hata i te tuna
 past see pers Hata prep the eel
 'Hata saw the eel'
- (b) I mau te tuna i a Rewi
 past caught the eel from pers Rewi
 'The eel was caught because of Rewi'.

However, it is not possible to relativize on the e-marked phrase of the passive by this method (see further 4.3.2.4). Thus relativization can occur with all the \emptyset -marked NPs we have been considering as candidates for basic subjecthood. Relativization does not distinguish between the \emptyset -marked NPs of active and passive sentences.

4.1.17 Questioning

Keenan also posits (1976, 320) that subject NPs are amongst the NPs which can be questioned. The general strategy for questioning NPs in Maori involves the insertion of an appropriate question particle in the position of the questioned NP, with no fronting or further side effects (see 2.4.3). Thus,

e-phrases:

- (4128) Kua pūhia te pūru e wai?
 perf shoot-pass. the bull by who
 'Who has the bull been shot by?'

(although this is not the most usual formulation of the question, which would normally be with the actor-emphatic);

i-phrases in actives:

- (4129) Kei te haere a Rewi ki te tiki i ngā
 at(pres) the move pers Rewi to the fetch prep the(pl)
 aha?
 what
 'What is Rewi going to fetch?';

incorporated objects:

- (4130) Kei te hoko aha a Tamahae?
 at(pres) the buy what pers Tamahae
 'What is Tamahae buying?'

(although again, this is not the most usual formulation);

i-phrases in statives:

- (4131) I pakaru i a wai te poti o Hata?
 past broken from pers who the boat of Hata
 'Who smashed up Hata's boat?';

goal-phrases marked with ki:

(4132) Kei te kōrero koe ki a wai?

at(pres) the talk you(sg) to pers who

'Who are you talking to?',

and others. The above examples show that this mode of question formation extends a considerable distance down the RH (and AH), and in fact appears to be possible at least as far down as to cover all Oblique NPs. None of the following, however, is possible as a normal question:

Ø-marked NP in intransitives:

(4133) *I haere a wai ki te whare?

past move pers who to the house

'Who went to the house?'

Ø-marked NP in actives:

(4134) *I patu a wai i te kau?

past kill pers who prep the cow

'Who killed the cow?'

Ø-marked NP in passives:

(4135) *I patua a wai e te pūru?

past kill-pass. pers who by the bull

'Who was killed by the bull?'

Ø-marked NP in statives:

(4136) *Kua mau te aha i a Tamahae?

perf caught the what from pers Tamahae

'What got caught because of Tamahae?'

Although they occur as echo questions, they are certainly not the standard mode of questioning Ø-marked NPs in Maori. Instead, we find the following forms:

for Ø-marked NPs of intransitives:

- (4137) Ko wai i haere ki te whare?
 top. who past move to the house
 'Who went to the house?';

for Ø-marked NPs in passives:

- (4138) Ko wai i patua e te pūru?
 top. who past kill-pass. by the bull
 'Who was killed by the bull?';

and, for the Ø-marked NP in actives, the actor-emphatic:

- (4139) Mā wai koe e whakahoki ki te kāinga?
 by who you(sg) non-pt cause-return to the home
 'Who is taking you home?'
- (4140) Nā wai a Pare i mau ki te hōhipera?
 by who pers Pare past take to the hospital
 'Who took Pare to the hospital?'

Thus we find that some types of Ø-marked NPs can be questioned by the usual question-pronoun strategy, together with ko-fronting. This means that the questioning of intransitive and passive subjects is a more complex process than the questioning of other constituents. However, note that the fronting with ko is perfectly natural from a communicative point of view given the function of ko as described in 2.4.6 and 4.1.11. The Ø-marked NPs of transitives are questioned by using the actor-emphatic (it appears that ko-fronting with transitives produces an echo question). Again, semantically, this seems most reasonable: when questioning the agent, the form used is that which gives prominence to the agent. Now, given that the mā/nā construction probably involves a re-allocation of grammatical functions, and certainly

the deletion of markers on other NPs, this is more complex than ko-fronting.

As a final indication of the normality of mā/nā questioning, consider

the following from a text with 'comprehension' questions:

- (4141) TEXT Kātahi ka whiua e ia tāna mōkai
 then unspec throw-pass. by she her(sg) youngest son
 ki te moana
 to the sea
 'So her youngest son was thrown by her into the sea'
- QUEST Nā wai a Maui i whiū ki te moana?
 by who pers Maui past throw to the sea
 'Who threw Maui into the sea?'

Here, even though the text involved a passive, the question is active, and uses the actor-emphatic form. The passive with e wai would be an echo question.

Questioning the Ø-marked NP in statives most usually involves a relative clause as in:

- (4142) He aha te mea i mau i a Tamahae?
 cls what the thing past caught from pers Tamahae
 'What was caught because of Tamahae?'

This involves a completely different structure from the statement, one which is not, under any interpretation, a transform of the statement alone.

Thus in terms of complexity of questioning processes,

Su in stative > Su in active > Su in intr, pass > other NPs.

This appears to work very much counter to the AH, and, since it discriminates amongst basic Sus, possibly also against the assumption that a grammatical relation like Su has constant properties across

a variety of sentence types, even those which all seem to have a claim to basicness. However, the most fundamental claim about questioning - that subjects can be questioned - is not in doubt in Maori.

4.1.18 Clefting

It is not clear what constructions in Maori (if any) should be considered as cleft; none of them have the verbal characteristics associated with clefting in languages like English. It is possible that the ko-sentences, whose information structure appears to have a lot in common with an English cleft sentence, should be regarded as such, but this is rather speculative. However, note that it is to \emptyset -marked NPs, and only to \emptyset -marked NPs that ko-fronting applies (but see 4.4.8 for a possible exception). Thus:

Intransitive:

- (4143) Ko te nuinga o ngā kaimahi, haere ai
 top. the majority of the(pl) ag-work move habit
 ki te tāone i ngā Paraire
 to the town at(neut) the(pl) Friday
 'The majority of the workers go to town on Fridays'

Passive:

- (4144) Ko Tamahae i tonoa ki te tiki mTti
 top. Tamahae past send-pass. to the fetch meat
 'It was Tamahae who was sent to fetch meat'

Stative:

- (4145) Ko te ahi i riro mai i a ia i
 top. the fire past bring hither from pers he from
 tōna tipuna, i a Mahuika
 his(sg) ancestor from pers Mahuika

'He brought back fire from his ancestress, Mahuika'
 (where the first i-phrase is the agent in the stative construction,
 and the other two are appositional source phrases)

Active:

(4146) Ko ētahi i whai ki ēnei tohutohu

top. certain past follow to these advice

'There were some who followed this advice'.

Clefted translations have not always been given, because it is not always clear that they are warranted. However, even if this is not clefting, it is nonetheless a property restricted to \emptyset -marked NPs, i.e. to a group of basic subjects, with possible extension to derived subjects as well.

4.1.19 Pronominal Copy

Personal pronouns rarely remain in relativized Su positions according to Keenan (1976, 320). As we have seen above (4.1.16) relativization on \emptyset -marked NPs does not leave a pronominal copy in general. It is usually the case that ai remains when NPs other than Sus and DOs are relativized, and although ai is not a personal pronoun, it may function as a pronominal copy, and this appears to support the analysis of \emptyset -marked NPs as subjects in Maori (examples will be found in 4.3).

4.1.20 Raising

As will be clear from the discussion of complementation with ki te (4.1.6), this involves Equi NP Deletion, and not Raising in Maori. Thus the only environment in which Raising is clearly involved

is negation, under the analysis of Hohepa (1969a), discussed in 2.4.4.

It will be recalled that Hohepa argues that negation with kore, as in

- (4147) E kore te tangata e whawhai
 non-pt not the man non-pt fight
 'The man won't fight'

should be analysed as

- (4148) E kore [e whawhai te tangata]
 non-pt be untrue non-pt fight the man.

where kore is a stative verb taking a sentential argument (in square brackets above) as its Su. Raising then operates to promote the Su of the lower predication (te tangata) to Su in the higher predication, giving (4147).

Treating all negators in this way, we have the following instances of Raising:

With an intransitive lower predication:

- (4149) Kāore tātou e haere ana āpōpō
 not we(incl,pl) pro- move -gress tomorrow
 'We are not going tomorrow'

from

- (4150) Ka hore [e haere ana tātou āpōpō]
 unspec be untrue pro- move -gress we(incl,pl) tomorrow.

With a stative lower predication:

- (4151) Kāore ia i ora
 not he past well
 'He did not get better'

from

(4152) Ka hore [i ora Ia]

unspec be untrue past well he.

With an active lower predication:

(4153) Kāore a Tamahae e tango i ōna hū

not pers Tamahae non-pt take off prep his(pl) shoe

'Tamahae didn't take off his shoes'

from

(4154) Ka hore [e tango a Tamahae i

unspec be untrue non-pt take off pers Tamahae prep

ōna hū]

his(pl) shoe.

With a passive lower predication:

(4155) Kāore a Tamahae i kōhehetia e Pani

not pers Tamahae past scold-pass. by Pani

'Tamahae wasn't scolded by Pani'

from

(4156) Ka hore [i kōhehetia a Tamahae e Pani]

unspec be untrue past scold-pass. pers Tamahae by Pani.

All these involve Raising the \emptyset -marked NPs in the embedded predication to Su position in the higher S. It is not possible to raise, for instance, the e-phrase in the passive, nor the i-phrase in an active transitive predication. (Chung and Seiter (1980, 625) reach the same conclusion about which NPs are subject to Raising in Maori.) Since one of the properties postulated about Raising in Relational Grammar is that the raised NP assumes the grammatical function of the predication from which it was raised (see e.g. Johnson, 1977a, 157 on the Relational Succession Law), this argues that these \emptyset -marked NPs are Sus.

Raising under negation is, however, optional, as the following show:

(4157) Kāore i mau tētahi tuna kotahi i a Rewi
 not past caught a certain eel one from pers Rewi
 'Rewi didn't catch a single eel'

(4158) Kāore e tipu te hua whenua ki reira
 not non-pt grow the fruit land to there
 'Vegetables won't grow there'

(4159) Kāore e āta kitea atu te ātaahua
 not non-pt clearly see-pass. away the beauty
 o te ngahere
 of the bush
 'The beauty of the bush could not be seen clearly'

and

(4160) Kāore i kite ia i te toka
 not past see he prep the rock
 'He didn't see the rock'.

Nevertheless, Raising is judged much preferable in the last example, and the forms involving Raising are the norm.

4.1.21 Pronominalization and Conjunction

That subjects can be expressed by morphologically independent pronouns has been illustrated so frequently that further examples seem redundant (see esp. 4.1.11 above). Keenan also claims (1976, 320) that these pronouns can be conjoined with full NPs. This statement has to be somewhat modified for Maori, because of its rather complex fashion of conjoining proper nouns to each

other, and proper nouns to pronouns. The following are not grammatical:

- (4161) (a) *Rewi me au
 Rewi with I
 (b) *au me Rewi
 I with Rewi
 'Rewi and I'

because me, the comitative marker, cannot normally be used with persons. With two proper nouns, we find:

- (4162) Hata rāua ko Pani
 Hata they(2) top. Pani
 'Hata and Pani',

but note that none of the following is grammatical:

- (4163) (a) *Pani māua ko au
 Pani we(2,excl) top. I
 'Pani and me'
 (b) *Pani rāua ko koe
 Pani they(2) top. you(sg)
 'Pani and you'
 (c) *Pani rāua ko ia
 Pani they(2) top. he
 'Pani and he'
 (d) *au māua ko Pani
 I we(2,excl) top. Pani
 'I and Pani'
 (e) *Koe rāua ko Pani
 you(sg) they(2) top. Pani
 'You and Pani'

- (f) *ia rāua ko Pani
 he they(2) top. Pani
 'He and Pani'.

However, instead we find:

- (4164) E haere ana māua ko Rewi ki te kaukau
 pro- move -gress we(2,excl) top. Rewi to the swim
 i roto i te awa
 at(neut) the inside at(adnom) the river
 'Rewi and I are going swimming in the river'
- (4165) Me haere kōrua ko Mārama ki te toa
 should move you(2) top. Marama to the store
 'You and Marama had better go to the store'
- (4166) Ko rāua anake ko Pani kei te kāinga
 top. they(2) only top. Pani at(pres) the home
 'Only he and Pani are at home'.

Similar examples with mātou, rātou and koutou could be adduced for 'more-than-two'. Thus, although the singular personal pronouns cannot be conjoined overtly with proper nouns, this cannot be taken as a strong counter-claim. In all these examples, the conjoined NPs originate as \emptyset -marked NPs although ko-fronting has operated in (4166). All the \emptyset -marked NPs in the sentence types under consideration allow such forms, as do all NP positions, in fact.

4.1.22 Floating Quantifiers

It is far from clear to what extent this phenomenon exists in Maori. The only possible candidate seems to be katoa 'all',

and the rules for its placement are not absolutely clearcut.

Thus we find:

- (4167) Kua motumotu katoa tana kanohi
 perf cut about all his(sg) face
 'His face is all cut about'

but

- (4168) Whakaotia ngā mea katoa
 cause-gather-pass. the(pl) thing all
 'Gather up all the things'
- (4169) Kia ora koutou katoa
 be well you(pl) all
 'Your health, all'.

The reverse order,

- (4170) Kia ora katoa koutou
 be well all you(pl)
 'Your health, all'

is possible, but not preferred. In contrast, we find

- (4171) Ka haere katoa rātou ki te moe
 unspec move all they(pl) to the sleep
 'They all went to sleep'.

Again, the reverse order

- (4172) Ka haere rātou katoa ki te moe
 unspec move they(pl) all to the sleep
 'They all went to sleep'

is possible, but not preferred.

Given the placement of adjectives, the position following the noun could be taken as the norm. However, the determiners

occur in prenominal position, and quantifiers might possibly be expected to behave like determiners rather than adjectives. It is certainly not clear from the data available whether one position is more natural than the other. In particular, it is not clear how the preferences given for (4169) and (4171) should be accounted for. In the face of lack of crucial data - i.e. lack of sufficient data about katoa in prepositional NPs - the claims of this section remain somewhat tentative. However, in a verbal sentence, katoa seems to fall in the verbal phrase:

- (4173) E haere katoa ana tātou āpōpō
 pro- move all -gress we(pl,incl) tomorrow
 'We are all going tomorrow',

but post-nominal position was judged possible, i.e.

- (4174) E haere ana tātou katoa āpōpō
 pro- move -gress we(pl,incl) all tomorrow
 'We are all going tomorrow'.

That this does not apply if katoa arises in a non-Su NP may be evidenced by

- (4175) Kāore anō ia kia mōhio ki ngā tamariki katoa
 not yet she comp know to the(pl) children all
 'She does not yet know all the children',

where katoa was judged immovable. This suggests that post-nominal position is normal, but that the \emptyset -marked NP in an intransitive sentence can 'float' the quantifier, even across an intervening NP, if there is one, e.g.

- (4176) I hinga katoa i a ia ngā toa
 past defeat all from pers he the(pl) champion
 o tērā whenua
 of that country

'He defeated all the champions of that country'.

If floating is preferred, then (4168) suggests that this is not a property of passive subjects, which might be slight evidence against their being basic. Note that (4171) exemplifies intransitive, and (4176) stative. However, the fact that (4168) is imperative may be an influential factor, since (4170) is also imperative (and stative) in form. In the elicited example:

- (4178) E patua katoatia ana ngā poaka e Hata
 pro- kill-pass. all-pass. -gress the(pl) pig by Hata
 'All the pigs are being killed by Hata',

floating was, however, judged acceptable.

4.1.23 Case-Marking

Keenan claims (1976, 320) that if any NPs are not case-marked then basic subjects will be amongst them (although he notes some exceptions to this). In Maori, the non-marked NPs are those underlined in the following:

- (4179) Ka haere a Rewi ki te whare
 unspec move pers Rewi to the house
 'Rewi went to the house'
- (4180) Kei te patu a Tamahae i a Rewi
 at(pres) the beat pers Tamahae prep pers Rewi
 'Tamahae is giving Rewi a hiding'
- (4181) Ka patua a Rewi e Tamahae
 unspec beat-pass. pers Rewi by Tamahae
 'Rewi got a hiding from Tamahae'
- (4182) Kua riri a Hata i a Tamahae
 perf angry pers Hata from pers Tamahae
 'Hata is angry on account of Tamahae'.

There is only one further common instance of a non-marked NP, and that occurs in the mā/nā construction of the actor-emphatic, which is here assumed to be non-basic. The implications of this will be examined later (see 4.2.23).

Keenan also claims (1976, 320) that the NPs which change their case-marking under causativization include basic subjects. In Maori, the \emptyset -marked NP of an intransitive changes its marking thus, e.g.

- (4183) (a) Ka hoki a Rewi ki te kāinga
 unspec return pers Rewi to the home
 'Rewi returned home'
- (b) Ka whakahoki a Tamahae i a
 unspec cause-return pers Tamahae prep pers
 Rewi ki te kāinga
 Rewi to the home
 'Tamahae took Rewi home',

where Rewi, \emptyset -marked in the intransitive (4183)(a), receives i-marking in the causative (4183)(b). The same holds true with causativization from a stative, e.g.

- (4184) (a) Kua oti te mahi hei a Hata mā
 perf finished the work hay of Hata and others
 'Hata and the others have finished hay-making'
- (b) Kua whakaoti a Hata i te mahi hei
 perf cause-finished pers Hata prep the work hay
 'Hata is finishing hay-making'.

It is also true from bivalent transitive to tri-valent:

- (4185) (a) Kei te ako a Tamahae i te reo wTWT
 at(pres) the learn pers Tamahae prep the language French
 'Tamahae is learning French'

- (b) Kei te whakaako a Hata i a
 at(pres) the cause-learn pers Hata prep pers
 Tamahae ki te reo wTWT
 Tamahae to the language French
 'Hata is teaching Tamahae French'.

However, with passives, we find:

- (4186) (a) Ka mōhiotia ngā ingoa e Hata
 unspec know-pass. the(pl) name by Hata
 'Hata knew the names'

giving under causativization:

- (b) Ka whakamōhiotia ngā ingoa e Hata
 unspec cause-know-pass. the(pl) name by Hata
 ki a Mārama
 to pers Marama
 'Hata told Marama the names',

i.e. \emptyset -marked NPs in passives do not change under causativization, which again suggests that they are not basic.

The case-marking of basic subjects also changes under action nominalization. From

- (4187) Ka tangi ngā manu
 unspec sound the(pl) bird
 'The birds sang'

we can derive

- (4188) te tangi a ngā manu
 the song of the(pl) bird
 'the singing of the birds'.

From

- (4189) Ka patu a Kupe i te wheke
 unspec kill pers Kupe prep the octopus
 'Kupe killed the octopus'

we can derive

- (4190) te patunga a Kupe i te wheke
 the kill-nom of Kupe prep the octopus
 'Kupe's killing of the octopus'

(note that this is a change in marking: the a in the sentential form is the personal marker, whereas the a in the nominalization is the possessive).

From

- (4191) Kua mate te hoariri
 perf dead the enemy
 'The enemy was killed'

comes

- (4192) te matenga o te hoariri
 the kill-nom of the enemy
 'the killing of the enemy'.

From

- (4193) Ka patua te wheke e Kupe
 unspec kill-pass. the octopus by Kupe
 'The octopus was killed by Kupe'

comes

- (4194) te patunga o te wheke e Kupe
 the kill-nom of the octopus by Kupe
 'the killing of the octopus by Kupe',

where in all instances the possessive marker replaces the Ø-marker.

Note that the derivation of (4194) from the passive is not entirely

uncontroversial: it could also be regarded as derived from the active, with the DO receiving the 'subordinate' possessive marker, and the Su receiving the agentive-demotion marker e. There seems to be no way of choosing between these two analyses, except by invoking rule simplicity in the grammar as a whole.

4.1.24 Semantic Role

The semantic role of the Su NP should be predictable from the form of the verb, according to Keenan's criteria (1976, 321). This presumably only applies in Maori to active and passive, since there is nothing in the form of intransitive or stative verbs to show that they belong to different classes. However, if we consider

- (4195) Kei te patu a Tamahae i a Rewi
 at(pres) the beat pers Tamahae prep pers Rewi
 'Tamahae is beating Rewi'

the only possible reading is that Tamahae is the agent, and in

- (4196) Kei te patua a Rewi e Tamahae
 at(pres) the beat-pass. pers Rewi by Tamahae
 'Rewi is being beaten by Tamahae',

the only possible reading is that Rewi is the affected entity.

Keenan also states (1976, 321) that basic subjects normally express the agent of the action, if there is one, although he notes that there are exceptions to this. In Maori, this is true of intransitives (non-derived) and also true if active sentences are basic. If, however, passive sentences are taken as basic in Maori, then it would be a major exception in this respect. However, other subject properties discussed hitherto appear to discriminate slightly in favour of the active, if

it is accepted that derived subjects inherit subject properties either wholly or partly, but that they cannot be more subject-like than basic subjects. However, even taking actives as basic, there remains one class of sentences in Maori of which this property does not hold, and that is the statives. Here, e.g.

- (4197) Kua riri a Hata i a Tamahae
 perf angry pers Hata from pers Tamahae
 'Hata was angry on account of Tamahae',

the cause of the state is Tamahae, and Hata is in the state of anger. Thus the agent is not here the subject, though there appears to be no reason for regarding this sentence-type as anything but basic. There are two further points to be made in this connection. The first is that most typically, the causer is not expressed in such sentences, and therefore might be regarded as in some way peripheral in such sentences. The second is that the agency here appears to be in some sense less direct than in obviously agentive structures (see e.g. 3.1.3), and this may in turn account for the i-marking. However, in stative sentences like

- (4198) Kua mau te ika i a Tamahae
 perf caught the fish from pers Tamahae
 'The fish got caught because of Tamahae',

it is more difficult to motivate an indirect agentive reading.

Keenan notes further (1976, 321) that subjects typically express the addressee in imperative sentences. However, he notes that Maori constitutes an exception to this, in that the imperative of a transitive verb is expressed by the passive. Thus as imperatives for the sentence types we have been considering, we get (see also 2.4.2):

For the intransitive:

(4199) E oho!

imp wake

'Wake up!'

and with an overt addressee,

(4200) E oho, Tamahae

imp wake Tamahae

'Wake up, Tamahae'.

For the stative:

(4201) Kia mau i a koe a Tamahae!

let be caught from pers you(sg) pers Tamahae

'You catch Tamahae!'

where the addressee is not the subject, and for some informants, must be named.

For bivalent verbs:

(4202) Awhinatia a Mere!

help-pass. pers Mary

'Help Mary!'

where again, the addressee is not the subject, compare

(4203) Whakapaitia te tēpu, e Mere!

cause-pretty-pass. the table voc Mary

'Set the table, Mary!'

Note that in the last example the e is not the agentive e, since the agentive e does not delete according to the number of syllables in its complement. Thus both stative imperatives and transitive imperatives are counter-examples to this subject property for Ø-marked NPs.

Finally under this head, Keenan claims (1976, 321) that

b-subjects normally exhibit the same position, case-marking and verb agreements as does the causer NP in the most basic type of causative sentence.

He notes, however, that causatives in Maori are easily passivized.

Thus we find in relation to

(4204) Ka tū te pounamu i runga i
 unspec stand the bottle at(neut) the top at(adnom)
 te tēpu
 the table

'The bottle was standing on the table',

(4205) Ka whakatū te tangata i te pounamu
 unspec cause-stand the man prep the bottle
 i runga i te tēpu
 at(neut) the top at(adnom) the table

'The man stood the bottle on the table'

and

(4206) Ka whakatūria te pounamu e te tangata
 unspec cause-stand-pass. the bottle by the man
 i runga i te tēpu
 at(neut) the top at(adnom) the table

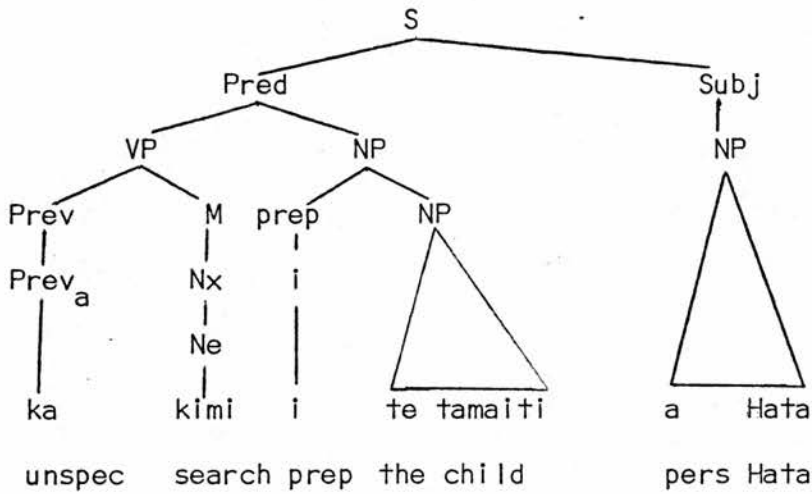
'The bottle was stood on the table by the man'.

Thus from this argument alone, it is not possible to conclude whether the case-marking expected of causer NPs and therefore of basic subjects is \emptyset or e.

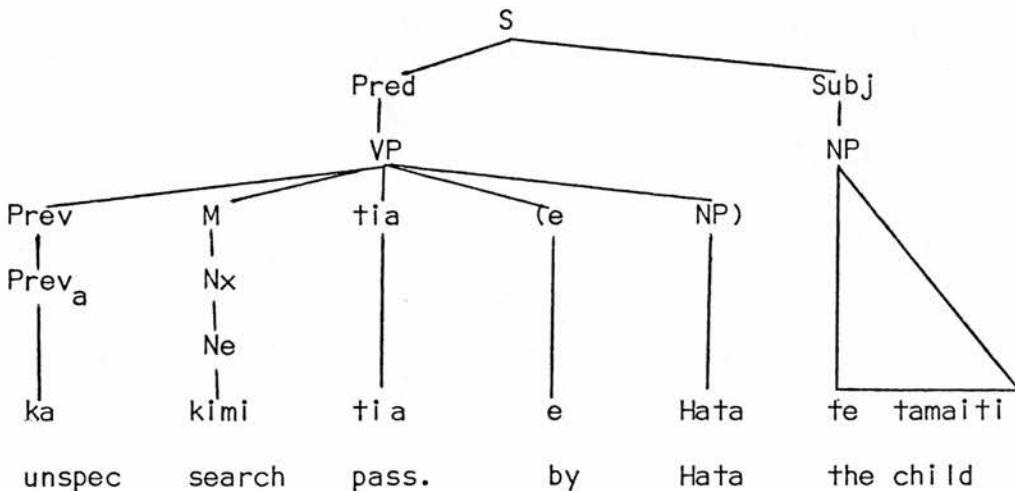
4.1.25 Immediate Dominance

Keenan discusses (1976, 322) the possibility of a Chomsky-type definition of Su as being the only NP immediately dominated

by S in the base. This is of course unproblematical for intransitives, and possibly also for statives (although the position of the i-phrase, if there is one, is not clear). However, it raises problems for transitive sentences, regardless of whether active or passive sentences are basic. Consider the bases proposed by Hohepa in his transformational account of Maori (Hohepa, 1967), which assumed an Aspects-type framework:



and



That is, from the structures directly underlying

(4207) Ka kimi i te tamaiti a Hata
 unspec search prep the child pers Hata
 'Hata looked for the child'

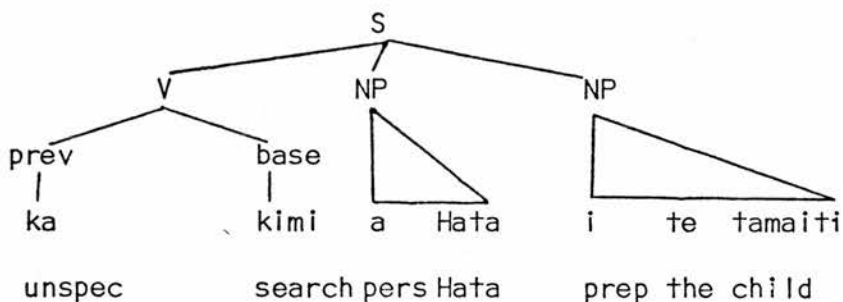
and (4208) Ka kimihia e Hata te tamaiti
 unspec search-pass. by Hata the child
 'The child was looked for by Hata',

i.e. from structures where the NPs occur in the marked order, he derives the structures with unmarked order of NPs:

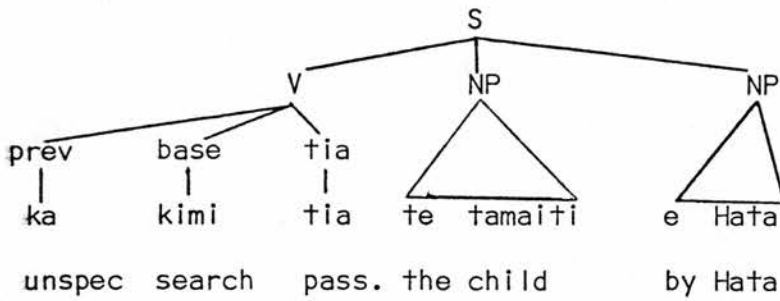
(4209) Ka kimi a Hata i te tamaiti
 unspec search pers Hata prep the child
 'Hata looked for the child'

and (4210) Ka kimihia te tamaiti e Hata
 unspec search-pass. the child by Hata
 'The child was looked for by Hata'.

There is, however, no evidence for taking the former order as basic, indeed rather the reverse. No argumentation is given: it is merely assumed that a VP constituent is required. Hohepa endeavours to provide a little motivation in a later paper (Hohepa, 1970, 10-11), arguing that since the *i*-marked phrases cannot precede the verb, they must be dominated by VP. Given the kind of approach to fronting taken by Dik (1978), discussed in 2.4.9, it will be seen that alternative explanations are available, e.g. that front position is reserved exclusively for subjects. Thus there seems to be little positive evidence for a VP, and it is therefore at least arguable that structures like



and



(if indeed we are to derive active and passive from separate bases) are better motivated, in that they posit few constituents whose existence is doubtful. If such a view is accepted, then no definition of Subject in terms of immediate dominance is possible in Maori. Nevertheless, it should be pointed out that the NPs which are immediately dominated by S in Hohepa's grammar are \emptyset -marked.

4.1.26

Conclusion

Our review of the subject properties proposed by Keenan suggests that in Maori most of them do indeed hold of \emptyset -marked NPs, the exceptions being (a question-mark indicates that there is some doubt about the evidence):

?Independent Existence

?Indispensability

Verbal Agreement

?Metaphoric idioms

?Immediate Dominance

?some semantic role properties.

The overwhelming majority of the properties are satisfied. One consequence of this is that it is entirely appropriate to speak of these NPs as subjects (as has been done from time to time in earlier sections, where circumlocution would have been inconvenient). If we accept Keenan's further hypothesis (1976, 323) that it is natural for derived subjects to have fewer Su properties, then this argues for passive subjects being derived in Maori.

The properties not found with passive subjects are: control of reflexivization without emphatic markers, victim of co-referential deletion with ki te, and a lack of the semantic properties associated with agency.

Thus, on Keenan's proposed hierarchy of likely loss of properties, the properties not exhibited by passive subjects are some of those most easily lost:

	Behaviour and	
<u>Coding Properties</u>	> <u>Control Properties</u>	> <u>Semantic Properties</u>
position	> case-	
marking	> verb	
agreement		

(Keenan, 1976, 324).

Thus we see that it is the more readily lost properties, i.e. the semantic properties and some of the behaviour properties which the passive Su does not have. Johnson in fact argues (1977b, 680-682) that it is inappropriate to speak of properties being "passed on" or "lost", and in particular, questions whether semantic properties could ever be passed on or lost. This seems an entirely sensible point of view, but does not alter the facts which Keenan is describing; it would presumably be acceptable to both scholars if the description were couched in terms of 'having' and 'not having'. This section thus appears to make a stronger case for the basicness of active over passive in Maori than it has previously been possible to make.

4.2 Mā/Nā Construction

Keenan goes on to suggest (1976, 323) that on the basis of the set of properties for basic sentences, it should be possible to determine the subject of non-basic sentences, amongst which the most problematic in Maori is the actor-emphatic construction with mā/nā, illustrated by

(4211) Mā Tamahae koe e whakahoki ki te kāinga

by Tamahae you(sg) non-pt cause-return to the home

'Tamahae will take you home'

and (4212) Nā te pūru i whai te tamaiti

by the bull past chase the child

'The child was chased by the bull'.

As has been pointed out, no English translation can capture the special emphasis of the Maori, and in this section, the construction will be translated in most instances by an English active, since otherwise the translations would be more unwieldy than they were worth. In what follows, the distribution of the subject properties between the two obligatory NPs in this construction will be investigated.

4.2.1 Independent Existence

It was shown above (4.1.1) that it is uncertain whether this is a characteristic of subjects in Maori; however, it is clear that it is invested in the mā/nā-marked NP:

(4213) Nā te ariki i hanga te whare nei

by the chief past build the house here

'The chief built this house'.

Thus this property argues for the mā/nā-phrase as Su rather than the \emptyset -marked NP.

4.2.2 Indispensability

Again, the property is not clearly characteristic of Maori, but we find the following:

(4214) Otirā, nā ngā ngaru o te moana i whakahoki

however, by the(pl) wave of the sea past cause-return

mai ki uta

hither to the shore

'However, the waves of the sea returned [him] to the shore'

(4215) Tērā e pōhēhētia nā te kurī i ngau

that non-pt think wrongly-pass. by the dog past bite

'Anyone would think [they]'d been chewed by the dog'.

Both of these are examples of contextual deletion, however. It is not clear that either NP is indispensable out of context, but the following judgements were elicited, though informants were somewhat unwilling to respond:

(4216) Nāna i hari

by-he past carry

'He carried [it]'

would be possible as a full sentence, with the missing NP understood from context, while the following was rejected:

(4217) *I hari ngā pēke

past carry the(pl) bag

'The bags were carried'.

Thus the \emptyset -marked NP is possibly dispensable, while the mā/nā NP appears to be contextually necessary. But semantically this is only sense: the force of the construction can be seen from Biggs's name for it: actor-emphatic. To use a transform designed to give emphasis to the actor, and then (subsequently) delete the actor is nonsense. Thus we see that the apparent indispensability arises as a result of factors somewhat different from the norm. It seems therefore that little weight should be given to this property.

4.2.3 Autonomous Reference

It appears that the mā/nā-NP can control reflexivization, e.g.

- (4218) Nā Mārama_i i whakapaipai ia_i
 by Marama_i past cause-pretty she_i
 'Marama prettified herself'.

A co-referential reading of the two NPs is evidently not obligatory, but seemed to be preferred. Contrast

- (4219) *Nāna_i i whakapaipai a Mārama_i
 by-she_i past cause-pretty pers Marama_i
 'She_i prettified Marama_i',

which was judged ungrammatical. However, the order of the NPs is fixed in this construction, and the normal direction of pronominalization in Maori would probably be sufficient to rule out (4219). However, it appears that on this criterion, the mā/nā-NP is more subject-like than the \emptyset -marked NP.

4.2.4 Co-referential Deletion in Co-ordination

The \emptyset -marked NP can control deletion, e.g.

- (4220) Nāna i whakatipu te tamaiti nei, ā nāna hoki
 by-he past cause-grow the child here and then by-he also
 i ako ki te waiata, ki te haka, ki te whakapapa
 past teach to the sing to the haka to the genealogies
 'He brought up this child, and he also taught [him] to sing, to haka, to recite genealogies'

- (4221) Nā Paki i tautoko tēnei mōtini, ka whakaaetia
 by Paki past second this motion unspec agree-pass.
 'This motion was seconded by Paki, and passed'.

(This second example is in fact ambiguous, but the meaning in context is clear. The ambiguity can be resolved by changing ka whakaaetia to a whakaaetia ana, which does not alter the deletion facts.)

In these examples, the deleted \emptyset -marked NPs are co-referential with the \emptyset -marked NPs in the first clauses.

It is uncertain whether the mā/nā-NPs can control deletion:

- (4222) ?Nāna i whakatipu te tamaiti nei, ā i ako
 by-he past cause-grow the child here and then past teach
 ia ki te waiata
 he to the sing

'He brought up this child, and he taught [him] to sing'.

This is judged odd, but the meaning is apparently clear enough. However, it appears that both NPs can simultaneously control deletion, e.g.

- (4223) Mā te Ātua koe e manāki, e tiaki
 by the Lord you(sg) non-pt guide non-pt protect
 'May God guide and protect you'

- (4224) Nāna aua āpōro i kohi, i kai
 by-he those apple past gather past eat
 'He gathered and ate those apples'.

However, no examples like this were found with the unmarked word order: all had the \emptyset -marked NP fronted to pre-verbal position. Thus it might possibly be arguable that these examples contain conjoined predicates, and might be derived without involving deletion. (A full discussion of this problem lies well beyond the scope of this work.)

We must also consider what can be deleted across co-ordinate clauses. It is somewhat odd to co-ordinate the actor-emphatic with an unmarked structure, e.g.

- (4225) ?Ka kuti a Tamahae i te hipi, ā nāna
 unspec shear pers Tamahae prep the sheep and then by-he
 i hari ki te pēne
 past carry to the pen

'Tamahae sheared the sheep, and by him [it] was taken to the pen',

but the \emptyset -marked NP can certainly be deleted if two actor-emphatics are conjoined:

- (4226) Nā Tamahae i hari te hipi, ā nāna i kuti
 by Tamahae past carry the sheep and then by-he past shear
 'Tamahae brought the sheep, and he sheared [it]'.

This appears not to be the case for the mā/nā-NP:

- (4227) *Ka haere a Tamahae ki te pēne, ā (nā) i
 unspec move pers Tamahae to the pen and then by past
 kuti te hipi
 shear the sheep

'Tamahae went to the pen and sheared the sheep'.

Thus, if there is any distinction between the two NPs here, the \emptyset -marked NP appears to be more subject-like than the mā/nā-NP.

4.2.5 Verb Agreement

As this is not a property of Sus in Maori, there is nothing further to be said in this connection.

4.2.6 Co-reference across Subordinate Clause Boundaries

It would seem that mā and nā actor-emphatics do not appear in complement clauses introduced by ki te, kia or me. Thus none of the following are attested:

- (4228) *Ka pTrangi ia ki te nā Mere i hari ngā pēke
 unspec want he to the by Mary past carry the(pl) bag
 'He wanted Mary to carry the bags'
- (4229) *Ka pTrangi ia ki te māna e hari ngā pēke
 unspec want he to the by-he non-pt carry the(pl) bag
 'He wanted to carry the bags'
- (4230) *Ka pTrangi ia ki te mā Tamahae e whakahoki
 unspec want he to the by Tamahae non-pt cause-return
 (ia) ki te kāinga
 he to the home
 'He wanted Tamahae to take (him) home'
- (4231) *Ka pTrangi ia māna ki te hari ngā pēke
 unspec want he by-he to the carry the(pl) bag
 'He wanted to carry the bags'
- (4232) *Ka whakaaro a Hone kia māna e whakahoki
 unspec decide pers John comp by-he non-pt cause-return
 a Mere ki te kāinga
 pers Mary to the home
 'John decided that he would take Mary home'
- (4233) *Ka whakaaro a Hone māna kia whakahoki a
 unspec decide pers John by-he comp cause-return pers
 Mere ki te kāinga
 Mary to the home
 'John decided that he would take Mary home'
- (4234) *Ka whakaare a Hone me māna e whakahoki
 unspec agree pers John should by-he non-pt cause-return
 a Mere ki te kāinga
 pers Mary to the home
 'John agreed that he should take Mary home'

- (4235) *Ka whakaae a Hone māna me whakahoki a
 unspec agree pers John by-he should cause-return pers
 Mere ki te kāinga
 Mary to the home
 'John agreed that he should take Mary home'.

That (4228) is ungrammatical is predictable merely on the grounds of the like-subject constraint on ki te complementation. (4229) shows that with a co-referential mā-phrase, the result is still ungrammatical, and (4230) that with a co-referential \emptyset -marked phrase, again, the result is ungrammatical. With Raising, as in (4231), the result is possibly a little better, but still not grammatical. With kia, (4232) shows that embedding is ungrammatical, (4233) shows that Raising does not improve matters here. With me, (4234) and (4235) show that, whether or not there is Raising, the embedding is ungrammatical. Note that the ungrammaticality of all these is not merely a constraint against the embedding of these transforms; non-introduced embedding is entirely grammatical:

- (4236) Ka pTrangi a Mere, mā Tamahae a ia e whakahoki
 unspec want pers Mary by Tamahae pers she non-pt cause-return
 ki te kāinga
 to the home
 'Mary wanted Tamahae to take her home'
- (4237) Ka pTrangi a Mere, māna e hari ngā pēke
 unspec want pers Mary by-she non-pt carry the(pl) bag
 'Mary wanted to carry the bags'
- (4238) Ka whakaaro a Hata mā Tamahae e hari ngā pēke
 unspec decide pers Hata by Tamahae non-pt carry the(pl) bag
 'Hata decided that Tamahae was to carry the bags'.

When we investigate co-reference with kia, we find:

(4239) *Ka whakaaro a Hata_i kia māna_i e hari ngā pēke
 unspec decide pers Hata_i comp by-he_i non-pt carry the(pl) bag
 'Hata_i decided he_i would carry the bags'

(4240) *Ka whakaaro a Hata_i māna_i kia hari ngā pēke
 unspec decide pers Hata_i by-he_i comp carry the(pl) bag
 'Hata_i decided he_i would carry the bags'

(4241) *Ka whakaaro a Hata_i mā Tamahae kia āwhina ia_i
 unspec decide pers Hata_i by Tamahae comp help he_i
 'Hata_i decided that Tamahae should help him_i'

(4242) *Ka whakaaro a Hata_i kia mā Tamahae e āwhina ia_i
 unspec decide pers Hata_i comp by Tamahae non-pt help he_i
 'Hata_i decided that Tamahae should help him_i'

i.e. whether Raising is used or not, we cannot get co-referential readings for either of the NPs in the embedded clause. Note that these clauses cannot be embedded under adverbial kia, either:

(4243) *Ka haere rātou kia mā ngā tamariki e
 unspec move they(pl) comp by the(pl) children non-pt
 kite te rākau
 see the tree
 'They went so that the children could see the tree'.

These structures can, however, be embedded in both unmarked and actor-emphatic constructions if they are non-introduced:

(4244) Ka mōtinitia e Pētera, mā te komiti e whakahaere
 unspec move-pass by Peter by the committee non-pt cause-move
 ngā āhuatanga mahi moni
 the(pl) scheme make money
 'Peter moved that money-making schemes be organized by the committee'

- (4245) Nā Pētera i mōtini, mā te komiti e whakahaere
 by Peter past move by the committee non-pt cause-move
 ngā āhuatanga mahi moni
 the(pl) scheme make money
 'Peter moved that money-making schemes be organized by
 the committee'.

Thus we are left to conclude that neither NP-type can be the victim of co-referential deletion.

With respect to control of deletion processes, only a limited amount of data is available, since many of the commoner verbs taking these complements are experience verbs, which do not occur in the actor-emphatic. However, the following occur:

- (4246) Nā Mārama i karanga kia haere ngā hēpara ki te
 by Marama past call comp move the(pl) shepherd to the
 tiki hipi
 fetch sheep
 'Marama called the shepherds to go and fetch the sheep',

- (4247) Nā Mārama i tono ngā hēpara kia haere ki te
 by Marama past order the(pl) shepherd comp move to the
 tiki hipi
 fetch sheep
 'Marama ordered the shepherds to go and fetch the sheep'

- and (4248) Nā Mārama i tono ngā hēpara kia haria
 by Marama past order the(pl) shepherd comp carry-pass.
 a ia ki te kāinga
 pers she to the home
 'Marama ordered the shepherds to carry her home'.

In the last two, the \emptyset -marked NP controls the deletion (although the e-phrase deletion might be explained differently). We have seen formerly that many kinds of NP can control deletion with kia. The fact that only the \emptyset -marked NP in this construction can do so is possibly thus a strong indication of the non-Su status of the mā/nā-NP.

With ki te, as shown earlier, only subjects can control deletion.

The following:

- (4249) Nā Mārama i tono ngā hēpara ki te hari i a
 by Marama past order the(pl) shepherd to the carry prep pers
 ia ki te kāinga
 she to the home
 'Marama ordered the shepherds to carry her home'

is entirely acceptable, and this must therefore count as strong evidence that the \emptyset -marked NP has subject properties, cf.

- (4250) *Nā Mārama i mea ngā hēpara ki te haere
 by Marama past tell the(pl) shepherd to the move
 'Marama told the shepherds that she was going'.

Thus it must be concluded from this section that although neither NP has the full range of possibilities open to other kinds of subject NPs, especially with respect to deletion, the \emptyset -marked NP has a substantial number of the controller properties in common with other subject types.

4.2.7 Verb Serialization Deletion

This phenomenon is at best rare in this construction, but the following appears to be an instance:

- (4251) Nā Mārama i kawē haere te āhuatanga o te mate a Taranaki
 by Marama past carry move the likeness of the death of Taranaki
 'Marama bore the sympathy for the death of Taranaki'

(Note that this translation is very inadequate, but an adequate explanation would be very lengthy.) Both NPs appear to be related to both verbs, and it is not at all clear what information about subjecthood is to be derived from this.

4.2.8 Absolute Reference

Here we consider the distribution of he and (t)ētahi between these two types of NP.

He occurs in the \emptyset -marked NP, e.g.

- (4252) Māku e tuhītuhi he reta ki te Karapu Māori o
 by-me non-pt write a letter to the club Maori of
 te Whare Wānanga o Ākarana
 the house learning of Auckland
 'I will write a letter to the Maori Club of the University
 of Auckland'

- (4253) Māku e mau mai he rāre māu
 by-me non-pt bring hither some lolly for-you
 'I'll bring (back) some lollies for you'.

However, it is unattested in the mā/nā-phrases, and as a piece of more positive evidence, consider the following paraphrases:

- (4254) I ngā rā o mua, mā te hōiho kē te
 at(past) the(pl) day of before by the horse instead the
 moua e tō
 mower non-pt tow
 'In former times, horses (a horse) pulled the mower instead'
- (4255) I ngā rā o mua, he hōiho kē māna
 at(past) the(pl) day of before a horse instead by-he
 e tō te moua
 non-pt tow the mower

'In former times, a horse pulled the mower instead'.

In (4252), at least, reference is not presupposed, but in (4253) it is, as it is in (4254) and (4255). The strategy found in (4255) is in fact quite common, e.g.

(4256) He minita nāna i tuhi te reta ki te PThopa
a minister by-he past write the letter to the Bishop
'The letter was written to the Bishop by a minister'.

Both NPs occur with (t)ētahi, e.g.

(4257) Nā tētahi manuhiri a ia i whakahoki ki te marae
by a certain visitor pers he past cause-return to the marae
'A visitor took him back to the marae'

(4258) Nā Hata i hari tētahi poaka ki te kāinga
by Hata past carry a certain pig to the home
'Hata brought a pig home'.

Thus it would appear that the mā/nā-phrase excludes indefinite reference, while the \emptyset -marked NP allows it; in the \emptyset -marked NP, reference may or may not be presupposed. In this respect, the mā/nā-phrase is more subject-like, but it should be noted that non-presupposed reference would be largely incompatible with a construction designed to emphasize the actor.

4.2.9 Retention of Presupposed Reference

Here we look at these constructions under negation and questioning. Consider first the negative:

(4259) Ehara mā Mere e horoi ngā rThi!
not by Mary non-pt wash the(pl) dish
'It won't be Mary who washes the dishes!'

The negation does not appear to change the presupposition of existence involved in the non-negative:

- (4260) Mā Mere e horoi ngā rThi
 by Mere non-pt wash the(pl) dish
 'It is Mary who'll wash the dishes'.

The same is true when a nā-sentence is negated:

- (4261) Ehara nā Hata i hari ngā pēke
 not by Hata past carry the(pl) bag
 'It wasn't Hata who carried the bags'.

Questions are formed, as with other construction-types, by using question intonation, and it appears thus that the presuppositions are not changed. Thus both NPs here preserve equally their presuppositions of existence, and both, therefore, are subject-like.

4.2.10 Metaphoric Idioms

Since I know of none cast in the mā/nā form, it is impossible to deduce anything from this criterion.

4.2.11 Topic

The decision as to which NP is "what we are talking about" is far from straightforward in connection with this construction. However, consider the following text, which provides significant numbers of nā-sentences:

- (4262) Ko Māui tētahi o ngā tipuna Māori rongonui.
 eq Maui a certain of the(pl) ancestor Maori famous
 He maha ngā mahi whakamTharo i mahia e ia.
 cIs many the(pl) deed cause-admire past do-pass. by he

¹Nāna i here te rā kia āta haere. ²Nāna
 by-he past tie the sun so that slowly move by-he
 anō hoki i hī te ika e kī nei
 again indeed past pull up the fish non-pt say-pass. here
 ko Te Ika a Māui. Ko te ahi i riro mai
 top. the fish of Maui top. the fire past fetch hither
 i a ia i tōna tipuna, i a Mahuika.
 from pers he from his(sg) ancestor from pers Mahuika
 Nā, ko te Māui nei te tamaiti whakamutunga a Makea-tūtara
 now eq the Maui here the child cause-last-nom. of Makea-tutara
 rāua ko tōna hoa wahine, ko Taranga. Tokorima
 they(2) top. his(sg) friend woman top. Taranga pers-five
 ōna tuākana, ā, kotahi tō rātou tuahine.
 their(pl) older brothers and then one their(sg) sister
 Ka puta a Māui ki waho, kāore tōna whaea
 unspec appear pers Maui to the outside not his(sg) mother
 i pTrangi ki a ia. Kātahi ka whiua e
 past want to pers he then unspec throw-pass. by
 ia tāna mōkai ki te moana. ³Kāti, nā
 she her(sg) youngest child to the sea however by
 ngā ngaru o te moana ia i whakahoki mai
 the(pl) wave of the sea he past cause-return hither
 ki uta. i a ia e takoto ana ka
 to the shore while pers he pro- lie -gress unspec
 kitea ia e tōna tipuna, e Tama-nui-ki-te-rangi,
 see-pass. he by his(sg) ancestor by Tama-nui-ki-te-rangi
 ka haria e ia ki tōna whare. ⁴Nāna i
 unspec carry-pass. by he to his(sg) house by-he past

whakatipu te tamaiti nei, ā, ⁵nāna hoki i ako
 cause-grow the child here and then by-he also past teach
 ki te waiata, ki te haka, ki te whakapapa.
 to the sing to the haka to the recite genealogies
 'Maui is one of the famous ancestors of the Maoris.
 He performed many wonderful deeds. He tied the sun
 so that it would go slowly. It was also he who pulled
 up the fish known as Maui's Fish. Fire was brought
 back by him from his ancestress, Mahuika. Now,
 this Maui was the youngest son of Makea-tutara
 and his woman friend, Taranga. There were five
 older children, and one of them was a girl. When
 Maui was born, his mother didn't want him. So she
 threw her youngest child into the sea. However,
 the waves of the sea returned him to the shore. While
 he was lying there, he was seen by his ancestor,
 Tama-nui-ki-te-rangi, who took him to his house.
 He reared this child, and also taught him to sing,
 haka, and recite genealogies'.

The first sentence can be taken as establishing the overall topic, i.e. Maui. In the first two numbered sentences, the nā-phrase refers to Maui, and it might thus be taken that the nā-phrase is the topic. However, notice that in the second sentence, a second topic is introduced, Maui's miraculous deeds. If we now examine the sentences numbered 1 and 2, we see that the deeds are expressed in the non-nā parts of the sentence. Certainly, they exemplify his deeds, and thus give some new information, but it is not clear that they are not the "immediate"

topic. Notice, however, that it is not just the \emptyset -marked NP which is being called topic here. (For a discussion of discourse-topics as including propositions, see e.g. Keenan and Schieffelin, 1976.) The second paragraph (beginning Nā, 'now') gives details of Maui's birth, and the topic again must be seen as Maui. The nā-phrase in sentence 3 here is certainly not a topic, but new information, whereas the \emptyset -marked NP refers to Maui, though by a demonstrative phrase, rather than a pronominalization. This appears to have a "reintroducing" effect, rather than topic status. The final instance, 5, continues the reference of the nā-phrase, parallel to the preceding clause, but the referential expression for Maui is deleted, presumably because it now has even greater topic status than the nā-phrase.

Thus it appears that either NP can be the topic, and that to a large extent it is pronominalization which indicates this, rather than the NP function itself. It thus appears that either NP may have this subject property.

4.2.12 Highly Referential NPs

As we have seen, there are restrictions on indefinites occurring in these NPs, particularly in the mā/nā-NPs. We must also examine the occurrence of personal pronouns, Proper Nouns and demonstratives in these two NP types.

Firstly, personal pronouns occur in both:

(4263) Nāna i hari ngā pēke

by-he past carry the(pl) bag

'He carried the bags'

(4264) Mā te Ātua koe e manāki, e tiaki.

by the Lord you(sg) non-pt guide non-pt protect

'May the Lord guide and protect you'.

(Pre-verbal positioning of the \emptyset -marked NP often occurs if this NP is a pronoun.)

Both NPs may also be realized by Proper Nouns:

(4265) Nā Paki i tautoko tēnei mōtini
 by Paki past second this motion
 'This motion was seconded by Paki'

(4266) Nā wai a Tamahae i kite?
 by who pers Tamahae past see
 'Who saw Tamahae?'

And both positions can be filled by demonstratives, see (4265) for the \emptyset -marked NP, and

(4267) Nā ēnei Pākeha mātou i ako ki tēnei mahi
 by these Pakeha we(excl,pl) past teach to this work
 'We were taught this activity by these Pakehas'.

Thus both NPs have all these properties.

4.2.13 Advancement Transformations

As was mentioned above, (4.1.13), the status of these sentences as outcome of an advancement transformation is highly uncertain. Essentially what we are endeavouring to do in section 4.2 as a whole is to see whether there are any grounds for regarding this as an advancement transformation or not. If it is, subject properties would be expected to cluster in the \emptyset -marked NP. Otherwise, it must be a type of focus transformation with some rather strange side-effects.

It should be noted here that it is not possible to subject this type of sentence to other advancement-to-subject transformations, i.e. to passive. Thus we cannot derive

(4268) I kītea ngā pūru e Tamahae
past see-pass. the(pl) bull by Tamahae

'The bulls were seen by Tamahae'

or (4269) *Nā Tamahae i kītea ngā pūru
by Tamahae past see-pass. the(pl) bull

'The bulls were seen by Tamahae'

from (4270) Nā Tamahae i kite ngā pūru
by Tamahae past see the(pl) bull

'Tamahae saw the bulls'.

Though (4268) is grammatical, there is no evidence to support such a derivation. Thus it is impossible to argue from passivization that either NP is non-Su in the actor-emphatic sentences, on the grounds that it can be promoted to Su.

4.2.14 Scope

Given the lack of occurrence of he in mā/nā-phrases, it is not possible to gain much insight from this property. In addition,

(4271) *Nā ngā tāngata katoa i kite he tamaiti
by the(pl) men all past see a child

'All the man saw a child'

was rejected, though if tētahi replaces he, it was accepted. However, this does not reveal anything about scope.

4.2.15 Position

The leftmost NP in these sentences is always the mā/nā-phrase, and even though the \emptyset -marked NP can be fronted, it can never be first:

(4272) Māku koe e whāngai
by-me you(sg) non-pt feed

'I'll feed you'

but (4273) *Koe māku e whāngai
 you(sg) by-me non-pt feed
 'I'll feed you'.

However, ko-fronting is evidently possible, thus:

(4274) Ko koe māku e whāngai
 top. you(sg) by-me non-pt feed
 'It is you who'll be fed by me',

although it seems to be rather rare. Since it has been shown that ko-fronting normally applies to Sus, this would seem to point to the \emptyset -marked NP in the actor-emphatic as subject, despite the fact that it is not the leftmost NP in the unmarked order for this construction.

4.2.16 Relativization

Nā and mā phrases can be relativized, thus:

(4275) Mahue mai ana ngā waka e hari rā i
 leave hither indeed the(pl) canoe non-pt carry there prep
 ngā tāngata, nāna nei i tinihanga a Te Tai
 the(pl) men by-he here past cheat pers Te Tai
 [He] left behind the canoes carrying the men who had tricked
 Te Tai'.

(Note that nāna is more usual than nā ratou in such constructions, despite the plural referent; the latter appears to be a modern development.)

(4276) Ko wai te tangata pai māna (*nei) e waiho tana
 eq who the man nice by-he here non-pt leave his(sg)
 koti ki konei?
 coat to here
 'Who is the kind man who will leave his coat here?'

There are two problems to be noted here. The first is that examples of relativization with mā are not very common, and therefore their properties are not entirely clear. The second concerns the relativization strategy. Relativization on basic subjects (and also passive subjects, now regarded as derived) is by means of juxtaposition, without pronominalization (see 4.1.16). Here, we have juxtaposition, but a pronominal copy remains behind in nāna, etc. Thus these NPs do not relativize by the same strategy as basic subjects, nor by the same strategy as the most central class of derived subjects. Relativization with nā often involves, in addition to the retention of the pronominal copy, nāna, the addition of one or other of the deictic particles nei, nā, rā. The conditions of choice amongst these are determined by the usual considerations for these deictics; compare (4276) with the following:

- (4277) Kua tae mai te kōtiro nāna nā i hoko mai
 perf arrive hither the girl by-she there past buy hither
 ngā whurutu
 the(pl) fruit
 'The girl who bought the fruit has arrived'

- (4278) Kei hea te tangata nāna rā i pupuhi
 at(pres) where the man by-he there past shoot-pass.
 te pūru?
 the bull
 'Where is the man who shot the bull?'

which use nā and rā respectively. Relatives with nā-sentences are fairly common, and instances without deictic particles are attested, e.g.

- (4279) Ko tēhea te tangata nāna i whakakī ngā pēke
 eq which the man by-he past cause-full the(pl) bag

ki te kina?

with the sea-egg

'Which is the man who filled the bags with sea-eggs?'

Thus the deictic particle may be irrelevant to the relativization process (but see further discussion in 4.3 below). It is clear, however, that the mā/nā-phrases are not relativized by the same strategy as basic Sus.

The Ø-marked NPs in actor-emphatic constructions can also be relativized, thus:

(4280) Kua pakaru ngā pereti nā Mere i horoi
perf broken the(pl) plate by Mary past wash
'The plates Mary washed are broken'.

This is, in fact, one of the commonest strategies for relativizing the notional DO in Maori. (For further details, see 4.3.2.2.)

The most important fact to note is the relativization strategy: the Ø-marked NP is deleted from the actor-emphatic relative clause, which is juxtaposed to the antecedent in the main clause. No pronominalization occurs. The Ø-marked NP thus relativizes using the strategy associated with basic Sus and with the derived Su of the passive (see 4.1.16). This seems to be strong evidence for regarding the Ø-marked NP of the actor-emphatic as the Su. (For further justification of this claim, see 4.3.2.)

4.2.17 Questioning

As has already been mentioned (4.1.17), questions using the actor-emphatic are probably the commonest way of questioning the actor.

Thus:

(4281) Mā wai koe e whakahoki ki te kāinga?

by who you(sg) non-pt cause-return to the home

'Who is taking you home?'

This fits well with the semantic characteristics of the construction:

in a question, the NP questioned is the one to which our attention

is drawn. This also explains why the \emptyset -marked NPs cannot be questioned (except in echo-questions):

(4282) *Mā Tamahae e whakahoki a wai ki te kāinga?

by Tamahae non-pt cause-return pers who to the home

'Who is Tamahae taking home?'

There would be a clash here: our attention would be strongly directed to two different NPs, by the actor-emphatic to the mā/nā-NP, and by the process of questioning, to the \emptyset -marked NP. Given that Subject NPs are not questioned by the 'substitution-of-a-Q-word' strategy, it is difficult to decide which of the two NPs in the actor-emphatic construction shows more subject-like behaviour: the mā/nā-NP, which can be questioned by this strategy, or the \emptyset -marked, which cannot be questioned in this construction.

4.2.18 Clefting

It was suggested in the discussion of Clefting above (4.1.18) that it might be possible to regard fronting with ko as clefting. The NP marked with mā/nā cannot be clefted with ko, which is not surprising, since it is likely that it has already been fronted by another movement transformation. Thus

(4283) *Ko nā Tamahae i hari ngā pēke

top. by Tamahae past carry the(pl) bag

'It was Tamahae who carried the bags'

(4284) *Ko Tamahae i hari ngā pēke

top. Tamahae past carry the(pl) bag

'It was Tamahae who carried the bags'.

(Note that ngā pēke in (4284) is not marked by a preposition. The sentence becomes completely grammatical if i is inserted before this NP, but it is then not related to the actor-emphatic construction.)

The \emptyset -marked NP can be fronted with ko in examples like (4274), repeated here for convenience:

(4274) Ko koe māku e whāngai

top. you(sg) by-me non-pt feed

'It is you who'll be fed by me'.

As mentioned in 4.2.15, this must constitute strong evidence for regarding the \emptyset -marked NP as the Subject.

4.2.19 Pronominal Copy

As we have seen in 4.2.15, relativization suggests that the mā/nā-phrases are not subject-like, in that they do require a pronominal copy (and, what is more, one that is identifiable as a personal pronoun) to remain behind under relativization. Since the \emptyset -marked NPs do not require or allow pronominalization, they behave like typical Sus with respect to this property.

4.2.20 Raising

Since we concluded that Raising occurs only in Maori negatives, we must consider negation of the actor-emphatic construction here. We find only negation with ēhara, e.g.

(4285) Ehara mā Mere e horoi ngā rThi

not by Mary non-pt wash the(pl) dish

'It is not Mary who will wash the dishes'.

If this is analysed as embedding as discussed in 2.4.4, then we have an underlying structure

- (4286) E hara [mā Mere e horoi ngā rThi]
 non-pt wrong by Mary non-pt wash the(pl) dish
 'It is not Mary who will wash the dishes'.

Now, it is unclear whether Raising has taken place to produce the surface structure of (4285), since the pre-verbal position of mā Mere in the affirmative means that no positional change takes place.

It proved impossible to elicit native speaker judgements on constituency which might have pointed to an answer. However, it is at least clear that if Raising is involved, it operates on the mā/nā-NP, and not the Ø-marked NP. However, it must be borne in mind that there is no positive evidence that this type of construction involves Raising under Negation.

4.2.21 Pronominalization and Conjunction

Many examples have illustrated that both NPs can be pronouns. The same problem about the form of conjunction as was discussed in 4.1.21 arises with respect to both types of NP in these constructions. Thus we find:

- (4287) Mā rāua ko Hata e whāngai ngā kurī
 by they(2) top. Hata non-pt feed the(pl) dog
 'He and Hata will feed the dogs'

and (4288) Nā Hata i whakahoki māua ko Marama ki te kāinga
 by Hata past cause-return we(2,excl) top. Marama to the home
 'Hata took Marama and me home'.

Thus we see that, with respect to this property, both NPs behave

in a way which does not distinguish them from basic Sus.

4.2.22 Floating Quantifiers

Only very limited data is available for either NP with respect to this property. However, the following judgements were elicited:

(4289) Nā ngā tāmariki katoa i āwhina a Pani
by the(pl) children all past help pers Pani
'All the children helped Pani'

(4290) *Nā ngā tāmariki i āwhina katoa a Pani
by the(pl) children past help all pers Pani
'Pani was helped by all the children'.

Thus the nā-phrase cannot float a quantifier to post-verbal position. (This is probably not surprising; it would appear to split the NP after it had been moved, so that part of it returned to its former position; and if it is accepted that the construction involves a clausal Su, the floated quantifier would no longer be in the higher predication, where it originated.)

On the other hand, of the following

(4291) Nā Pani i āwhina katoa ngā tāmariki
by Pani past help all the(pl) children
'All the children were helped by Pani'

(4292) Nā Pani i āwhina ngā tāmariki katoa
by Pani past help the(pl) children all
'All the children were helped by Pani',

(4292) was judged more usual, but (4291) was not rejected. Thus it appears probable that the \emptyset -marked NP can float katoa to post-verbal position. The \emptyset -marked NP is thus more subject-like on this criterion.

4.2.23 Case-Marking

As was shown above, Ø-marking is characteristic of subjects and only subjects, if the actor-emphatic construction is not taken into consideration. Therefore we must conclude that in this respect the mā/nā NP lacks a subject property which is clearly located in the other NP.

With respect to change of marking in causatives, compare

(4293) Nā ēnei Pākehā mātou i ako ki tēnei mahi
by these Pakeha we(excl,pl) past teach to this work
'We were taught this activity by these Pakehas'

and (4294) Nā ēnei Pākehā mātou i whakaako ki tēnei mahi
by these Pakeha we(excl,pl) past cause-learn to this work
'We were taught this activity by these Pakehas'.

It can be seen that neither NP changes marking. However, Biggs attests (1969, 73):

(4295) Mā Pita e haere
by Peter non-pt move
'Peter will go'.

This was rejected by my informant, who, however, accepted

(4296) Mā Pita e haere a mua
by Peter non-pt move pers the front
'Peter will lead'.

Thus, although

(4297) *Mā Pita e hoki
by Peter non-pt return
'Peter will return'

was rejected, some question about this judgement remains, since

it seems entirely parallel to (4295), and thus might be expected to be acceptable to at least some speakers. If (4297) is compared with (4298) Mā Hata e whakahoki a Pita

by Hata non-pt cause-return pers Peter

'Hata will bring Peter back',

it can be seen that it is the mā-phrase here which changes case-marking (if the data is allowable). Action nominalizations are not derivable from such constructions. Thus one of the case-marking properties points to the \emptyset -marked NP as subject, and a second to the mā/nā-NP as Su.

4.2.24 Semantic Role

The semantic role of both NPs is predicted from the form of the verb, if we consider the construction as a whole, but neither NP has a predictable semantic role if we consider the verb form in isolation. However, restrictions typical of object NPs are found on the \emptyset -marked NP, and thus the mā/nā-NP must be regarded as more subject-like here. Also, it is the mā/nā-NP which expresses the agent. These sentences do not have a corresponding imperative, though they may have imperative force, e.g.

(4299) Mā kōrua e hari ngā pēke!

by you(2) non-pt carry the(pl) bag

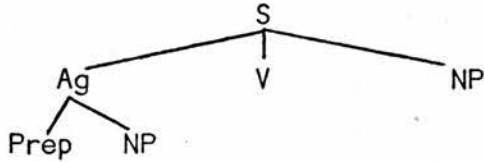
'You are to carry the bags!'

Here the addressee (which must be present) is the mā/nā-NP.

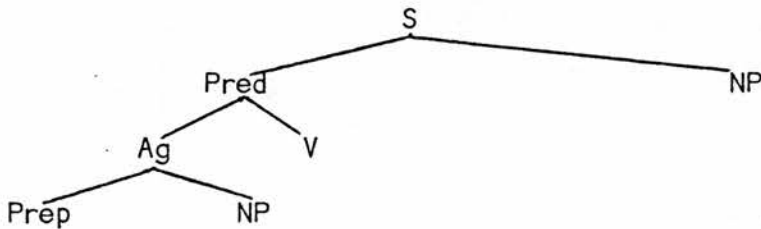
However, it is the \emptyset -marked NP which has the position and case-marking of the basic causer NP. Thus, as in 4.2.23, we find a certain conflict in the distribution of these properties between the two NPs.

4.2.25 Immediate Dominance

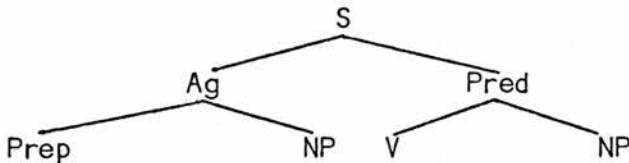
It is impossible to imagine a structure for these sentences in which both NPs are not immediately dominated by S, thus:



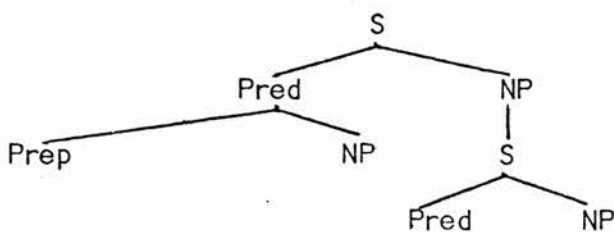
(omitting details), unless it is claimed that the need for something like the Ag node above constitutes an intermediate node. It seems highly improbable that either of the following configurations could be motivated:



or



although the analysis proposed by Chung (1978, 175-177) gives a structure of the kind



where the \emptyset -marked NP is immediately dominated by an embedded S, but neither of the NPs concerning us in this section is immediately dominated by the highest S. Thus it is unlikely that on any analysis one of the NP types could be declared more subject-like on the grounds that it was immediately dominated by S.

4.2.26 Conclusion

We see that the two NPs split the subject properties in the following way:

Mā/Nā Subject Properties:

Independent Existence, ?Indispensability, Autonomous Reference, Absolute Reference, Presupposed Reference, Topic, Highly Referential NPs, Position, Pronominalization and Conjunction, a minor case-marking property, Semantic Role, Immediate Dominance. Total: 12.

\emptyset -marked Subject Properties:

Co-referential Deletion, Co-reference across clause boundaries, Presupposed Reference, Topic, Highly Referential NPs, Relativization, Clefting, Pronominal Copy, Pronominalization and Conjunction, Floating Quantifiers, Case-marking, a minor semantic role property, Immediate Dominance. Total: 13.

This means, in terms of number of properties, that the two NPs are almost equally subject-like. If we consider types of property, then the \emptyset -marked NP has the coding properties, and has more behaviour properties, whereas the mā/nā-NP has the semantic properties, by and large. Now, according to Keenan's theory (1976, 323ff), if an NP is assigned any of the three sets of properties in his property hierarchy, it is assigned any higher up as well. This is not true of the mā/nā-NPs,

which have the semantic properties, but not those further up the hierarchy. The \emptyset -marked NP, however, has the coding properties and some behaviour and control properties, which is in keeping with an analysis on which they are derived subjects.

Schachter (1977a) postulates for Philippine languages that there are two sets of properties, reference-related and role-related. Reference-related properties include topic, definiteness, presupposed referentiality, indispensability, relativization, and launching floating quantifiers, whereas role-related properties concern imperative subject, reflexivization, control of co-referential deletion, and initial position. He argues that in Tagalog no NP is the subject, these properties being divided between two NPs, one having reference-related properties, and the other role-related properties. It might be suggested that an analysis of this sort is relevant for Maori sentences of the actor-emphatic type. However, when we consider the way these properties divide between the two NP types, this position looks quite untenable, since, for example, the mā/nā-phrases, while possessing many reference-related properties, do not launch floating quantifiers on the one hand, but also have several role-related properties on the other. \emptyset -marked NPs possess some of both kinds of properties also, and thus a position similar to that taken by Schachter for Tagalog does not seem possible here.

In addition, it is worth noting that Clark (1976, 111ff) suggests that there may be some historical evidence for regarding the \emptyset -marked NP as the subject, although the case is not very clear.

It must be further noted that the findings of this section pose certain problems for the analysis of this construction proposed by Chung (see 2.4.8). Under her analysis, the mā/nā-NP is predicative, and

there is no suggestion that it has ever been a subject. This means that under her proposal there is no explanation for the fact that these NPs have quite a substantial number of subject properties, including some behaviour properties. Her proposal provides no explanation for such properties occurring with mā/nā-NPs, but not with other prepositional predicate phrases. (A full examination of the properties displayed by other prepositional predicate phrases would go well beyond the scope of this work, but is clearly required before a full assessment of the actor-emphatic construction can be made.) Such a distribution of properties is consistent, however, with an analysis on which the actor-emphatic construction is transformationally derived from a structure in which these NPs were underlying subjects.

The nō-sentences included by Biggs (1969, 74) under the heading 'actor-emphatic' have not been discussed in this section because lack of data (they are not common) makes it impossible to investigate their properties. However, it should be noted that since the i-marker appears in the nō-construction, the post-verbal NP does not have the coding properties of the basic subject, and it must be assumed that an analysis of the kind proposed here does not apply to such sentences.

4.3 Relativization

As has been mentioned above, relativization in Maori poses a number of problems for Relational Grammar. It is also an area of great complexity, and a full discussion is warranted, as it throws a good deal of light on the kinds of grammatical relations which must be recognized in a grammar of Maori. Although the facts concerning relativization of Su NPs have been given above (4.1.16, 4.2.16), they are repeated here for the sake of completeness in this section.

4.3.1 The Keenan-Comrie Proposals

A few details of these proposals have already been given (see 4.0.0). In addition to their claim that the AH "expresses the relative accessibility to relativization of NP positions in simplex main clauses" (Keenan & Comrie, 1977, 66), they put forward three Hierarchy Constraints (HCs) which express language universals about relative-clause formation (1977, 67):

1. A language must be able to relativize subjects.
2. Any RC-forming strategy must apply to a continuous segment of the AH.
3. Strategies that apply at any one point of the AH may in principle cease to apply at any lower point.

The consequences of the HCs for relativization are specified thus (1977, 68):

1. A language must have a primary RC-forming strategy.
2. If a primary strategy in a given language can apply to a low position on the AH, then it can apply to all higher positions.
3. A primary strategy may cut off at any point on the AH.

Strategies are considered to differ if (1977, 65) "The relative position of the head NP and the restricting clause differs", or if "one presents a nominal element in the restricting clause that unequivocally expresses which NP position is being relativized", while another does not. This second criterion has been clarified subsequently, thus (Comrie & Keenan, 1979, 656):

We call strategies [-case] if no nominal element is present in the restricting clause which marks the NPrel unequivocally (see below), and [+case] if there is such a nominal particle. By nominal particle we understand either a nominal element - i.e. something which has, to a significant extent, the morphological features and syntactic distribution of things that are clearly NP's in the language - or something like a pre-

or post-position, which forms a constituent with NP's in simple sentences. The term 'unequivocally', however, was an error in our earlier presentation. What we should have stated, and now state, is that a RC strategy is [+case] if the nominal element in the restricting clause marks the NPrel AT LEAST as explicitly as is normally done in simple declarative sentences.

Maori is amongst the languages Keenan and Comrie examined (see 1977, 78 and Keenan and Comrie, 1979, 342), but it would appear that there are many complexities in Maori which they did not take into account.

4.3.2 Relativization Strategies in Maori

All Maori relative clauses occur after the head noun, and it might thus be expected that only two relativization strategies are logically possible, one with a case-coding pro-form, and the other without. This is undoubtedly so according to Keenan and Comrie's criteria, but in some respects such an analysis seems to overlook some crucial facts. Maori appears to have three strategies which should be recognized: one that is clearly case-coding, one which is clearly not case-coding, and a third whose status is not case-coding according to the criteria stipulated above, but which nonetheless has a certain case-coding character.

4.3.2.1 Relativization of Sus

Sus in Maori relativize without case-coding; the NP to be relativized is deleted, and the relative clause is juxtaposed with the head N without further marking. Thus

(4300) Me maumahara tonu koe ki ngā werawera i
 should remember always you(sg) to the(pl) sweat past
 heke i tōku tinana
 fall from my(sg) body
 'You should always remember the sweat that drips from my body'

is derived from

- (4301) (a) Me maumahara tonu koe ki ngā werawera
 should remember always you(sg) to the(pl) sweat
 'You should always remember the sweat'

- and (b) I heke ngā werawera i tōku tinana
 past fall the(pl) sweat from my(sg) body
 'The sweat dripped from my body'.

The relative clause here is intransitive, but the same strategy is also found with the Su of transitives, passives and statives. This non-case-coding strategy is the only one considered for Maori by Keenan and Comrie, since their data were insufficient to allow further analysis (see Keenan and Comrie, 1979, 342).

There is one factor complicating this description of Su-relativization and that is the appearance of ai in examples like

- (4302) Koia nei te poaka i pūhia ai e taku matua
 eq here the pig past shoot-pass. pro by my(sg) father
 'This is the pig that was shot by my father'

derived from

- (4303) (a) Koia nei te poaka
 eq here the pig
 'This is the pig'

- and (b) I pūhia te poaka e taku matua
 past shoot-pass. the pig by my(sg) father
 'The pig was shot by my father'

(from Chapin, 1974, 277fn) and

- (4304) I whakawhaititia ngā moni i kohia
 past cause-collect-pass. the(pl) money past gather-pass.

ai e te komiti

pro by the committee

'The money that was raised by the committee was collected up'

from (4305) (a) I whakawhaititia ngā moni
past cause-collect-pass. the(pl) money

'The money was collected up'

and (b) I kohia ngā moni e te komiti
past gather-pass. the(pl) money by the committee

'The money was raised by the committee'.

In both these cases the ai is optional, but its inclusion in some examples of Su relativization is judged ungrammatical. Chapin (1974) argues that ai in Polynesian languages is a pro-form, normally marking the deletion of oblique NPs, but he regards the ai in (4302) as exceptionally marking the deletion of the Su. Subsequent scholars (e.g. Chung, 1978) appear to accept this account of ai, at least with respect to non-Sus. Chung claims that ai is not used for Su relativization (1978, 71), a claim which does not account for (4302) and (4304). However, the existence of such examples is noted in Chung & Seiter (1980, 631). It appears that the status of ai in such examples requires further investigation, since, although it does not constitute a case-coding strategy in Keenan and Comrie's terms, it has some similar characteristics. This is particularly important in the light of Keenan and Comrie's findings about the rarity of pro-forms with subject relativization; the topic is treated at length below in 4.3.3, after further facts about the distribution of ai have been established.

4.3.2.2 Relativization of DOs

This is undoubtedly the most complex area of relativization in Maori. Keenan and Comrie claim (1977, 78) that DOs in Maori are not relativized by the strategy used for Sus, i.e. the non-case-coding strategy. It is certainly true that relativization of DOs with this strategy is not always acceptable in Maori.

Thus the following is rejected as ungrammatical:

(4306)*I hoko mai ia i te whare i hanga a Hata
 past buy hither he prep the house past build pers Hata
 'He bought the house which Hata built',

derived from

(4307) (a) I hoko mai ia i te whare
 past buy hither he prep the house
 'Hata bought the house'

and (b) I hanga a Hata i te whare
 past build pers Hata prep the house
 'Hata built the house'.

The version of (4306) with the pro-form ai is also ungrammatical for many speakers:

(4308)*I hoko mai ia i te whare i hanga ai a Hata
 past buy hither he prep the house past build pro pers Hata
 'He bought the house which Hata built'.

(Decisions about the grammaticality of this are somewhat confused; this point will be taken up later.) Such examples are corrected by native speakers to

(4309) I hoko mai ia i te whare i hangā e Hata
 past buy hither he prep the house past build-pass. by Hata
 'He bought the house which was built by Hata',

where the underlying DO has been promoted to Su by passivization, and the Su strategy then applies.

Not all such examples, however, are ungrammatical, as (4310) shows:

(4310) Ko ētahi o ngā tāngata i kite a Tamahae,
 top. some(pl) of the(pl) people past see pers Tamahae
 nō Te Kaha
 belong to Te Kaha

'Some of the people Tamahae saw came from Te Kaha',

derived from

(4311) (a) Ko ētahi o ngā tāngata nō Te Kaha
 top. some(pl) of the(pl) people belong to Te Kaha
 'Some of the people belong to Te Kaha'

and

(b) I kite a Tamahae i ngā tāngata
 past see pers Tamahae prep the(pl) people
 'Tamahae saw the people'.

Here the strategy used is the Su strategy. It appears that those DOs that can relativize directly in this way are those of the experience verbs. (It will be questioned in 4.4 whether they are in fact DOs, which has certain consequences for this discussion of relativization, but it will be assumed for the time that they are.) Thus all of the following were judged acceptable:

(4312) I hokona mai e ia te whare i pTrangi
 past buy-pass. hither by he the house past want
 a Hata
 pers Hata

'The house that Hata wanted was bought by him'

from (4313) (a) I hokona mai e ia te whare
 past buy-pass. hither by he the house

'The house was bought by him'

and (4313)(b) I pTrangi a Hata ki te whare
 past want pers Hata to the house
 'Hata wanted the house';

(4314) I tūtaki a ia ki te tamaiti i mōhio a Rewi
 past meet pers he to the child past know pers Rewi
 'He met the child that Rewi knew'

from (4315)(a) I tūtaki a ia ki te tamaiti
 past meet pers he to the child
 'He met the child'

and (b) I mōhio a Rewi ki te tamaiti
 past know pers Rewi to the child
 'Rewi knew the child';

(4316) Kāore ia i pai ki te waiata i rongo ia
 not he past good to the song past hear he
 'He didn't like the song that he heard'

from (4317)(a) Kāore ia i pai ki te waiata
 not he past good to the song
 'He didn't like the song'

and (b) I rongo ia i te waiata
 past hear he prep the song
 'He heard the song'.

Because the experience verbs vary in the marker for D0 (some take i, some ki, and some are found with both) it must be postulated that relativization is sensitive to this class of verbs, rather than to their surface marking. However, the borderline between experience verbs and canonical transitive verbs is unclear, as noted in 2.3.7. Tūtaki 'meet' is one of the problem cases. By the question-answer test, it is not

an experience verb, and the actor-emphatic test gives uncertain results, but suggests that it is not clearly a canonical transitive. Tūtaki appears in relative clauses constructed like (4310)-(4317), thus

- (4318) Ko ētahi o ngā tāngata i tūtaki a
 top. some(pl) of the(pl) people past meet pers
 Tamahae nō Te Kaha
 Tamahae belong to Te Kaha
 'Some of the people Tamahae met came from Te Kaha'

derived from

- (4319)(a) Ko ētahi o ngā tāngata nō Te Kaha
 top. some(pl) of the(pl) people belong to Te Kaha
 'Some of the people belonged to Te Kaha'

- and (b) I tūtaki a Tamahae ki ngā tāngata
 past meet pers Tamahae to the(pl) people
 'Tamahae met the people'.

Plainly, such cases are awkward for the generalization that only the DOs of experience verbs relativize using the Su strategy. (An alternative, that tūtaki is intransitive, with ki marking a Goal, cannot be excluded, but this poses problems for the account of the relativization of OBLs, see 4.3.2.4.)

It must also be noted that ai occasionally appears in relative clauses with experience verbs:

- (4320) I moe ia i te wahine i pTrangi ai ia
 past marry he prep the woman past want pro he
 'He married the woman he wanted',

derived from

- (4321)(a) I moe ia i te wahine
 past marry he prep the woman
 'He married the woman'

- (4321)(b) I pTrangi ia ki te wahine
 past want he to the woman
 'He wanted the woman',

although ai is optional here as in (4302) and (4304) above.

Canonical transitives have available three possibilities for relativizing their DOs. The first (illustrated in (4309)) involves the promotion of the DO to Su via the passive; a further example is given here:

- (4322) I waiata a Inia i te waiata i titoa
 past sing pers Inia prep the song past compose-pass.
 e Alfred Hill
 by Alfred Hill
 'Inia sang the song that was composed by Alfred Hill',

derived from

- (4323)(a) I waiata a Inia i te waiata
 past sing pers Inia prep the song
 'Inia sang the song'

- and (b) I titoa te waiata e Alfred Hill
 past compose-pass. the song by Alfred Hill
 'The song was composed by Alfred Hill'.

The second construction which can be used is the actor-emphatic.

Consider

- (4324) I waiata a Inia i te waiata nā Alfred Hill
 past sing pers Inia prep the song by Alfred Hill
 i tito
 past compose
 'Inia sang the song that Alfred Hill composed',

derived from (4323)(a) and

(4325) Nā Alfred Hill i tito te waiata

by Alfred Hill past compose the song

'Alfred Hill composed the song',

where te waiata is the Su of tito (see 4.2). This construction thus also appears to involve promotion of the underlying DO to Su, but if Chung's analysis of the construction is correct, then it is the Su of an embedded clause.

Note that this is parallel to relativizing on the man in

That the man stole the jewels is false,

producing the clause

*who that stole the jewels is false,

which is then embedded in a matrix clause, to give e.g.

*I helped the man who that stole the jewels is false.

It might be possible to argue that relativization occurs after Raising of the underlying DO to Su in the higher clause, thus from (4325), Raising gives

(4326) Nā Alfred Hill te waiata i tito

by Alfred Hill the song past compose

'Alfred Hill composed the song',

and relativization would thus apply, following the normal strategy for Sus, to the derived Su of the main clause. There are two problems associated with this attractive alternative. The first is that Raising is not common in this construction, and there is no independent evidence to support the analysis. The second is rather more damaging: there are examples of relativization which uncontroversibly do relativize on an NP from an embedded clause of this kind, see e.g. (4389).

Since the rules will have to allow access to NPs in such embedded clauses, there seems little reason to propose that Raising has taken place in examples like (4325). It is worth noting that this is a common strategy for the relativization of DOs in Maori.

The third method for relativizing the DOs of canonical transitives involves a possessive construction, as illustrated in

(4327) I waiata a Inia i te waiata a Alfred Hill i
 past sing pers Inia prep the song of Alfred Hill past
 tito ai
 compose pro

'Inia sang the song that Alfred Hill composed'

(or, a little more literally, 'Inia sang Alfred Hill's composed song').

A second example will facilitate the discussion of this construction:

(4328) I kite ia i te hōiho a te tamaiti i tiaki ai
 past see he prep the horse of the child past care pro

'He saw the horse that the child cared for'.

The possessive marker, a, is distinct from the personal marker, as shown by (4328), where it occurs with a common noun. With verb nominalizations, it contrasts with o, marking a subjective as opposed to an objective genitive. This distinction can be illustrated by the following pair:

(4329)(a) te patunga a Kupe (i te wheke)
 the kill-nom of Kupe prep the octopus
 'Kupe's killing (of the octopus)'

(b) te patunga o Kupe (e te wheke)
 the kill-nom of Kupe by the octopus
 'the killing of Kupe (by the octopus)'.

A may also indicate dominant, as opposed to subordinate, possession (see 2.2.4). Regardless of the usual possessive relation between the underlying Su and DO in this relative construction, the marker a always occurs, compare (4328) and

(4330) te hōiho o te tamaiti
 the horse of the child
 'the child's horse'.

It must also be pointed out that in (4327) and (4328) both the underlying Su and the underlying DO have been displaced from the relative clause, and ai (or nei, depending on tense) appears obligatorily.

Note further that the verb in the relative clause is accompanied by a tense/aspect marker, and that the construction is accordingly verbal, and not nominal. It is difficult to determine the processes that might be involved in deriving (4327) from the presumed underlying form

(4331) I tito a Alfred Hill i te waiata
 past compose pers Alfred Hill prep the song
 'Alfred Hill composed the song'.

The most obvious analysis is that the underlying Su is Raised to possessor in the main clause, either before or after relativization, i.e. the relative clause in (4327) is derived thus:

(4332) te waiata [i tito a Alfred Hill i te waiata]
 the song past compose pers Alfred Hill prep the song
 ↓ via relativization with the ai-strategy,
 te waiata [i tito ai a Alfred Hill]
 ↓ via Su-to-possessor Raising,
 te waiata a Alfred Hill i tito ai
 the song of Alfred Hill past compose pro

or, alternatively,

(4443) te waiata [i tito a Alfred Hill i te waiata]

↓ via Su-to-possessor Raising,

te waiata a Alfred Hill [i tito i te waiata]

↓ via relativization with the ai-strategy,

te waiata a Alfred Hill [i tito ai].

There does not seem to be any way of choosing between the two orderings on the basis of this data alone. There seems to be one major problem with this analysis, and that is the form of the possessive preposition: it is not the normal possessive marker for the object in question, but always a. There does not appear to be any reason, following this analysis, why this should be so. In addition, this analysis makes the claim that the ai-strategy can apply to DOs, provided that the Su is Raised from the relative clause. Normally the deictic rā is an alternative to ai with this strategy, but it is not possible here. Thus it seems rather questionable that this analysis is plausible, and the genesis of the construction remains something of a mystery. The fact that the pro-form is compulsory in this construction is a clear indication that the strategy here is not the same as the Su strategy, although it is not case-coding in Keenan and Comrie's terms.

The choice between the three constructions discussed for DOs of canonical transitives appears to be determined by factors which might be loosely termed "stylistic" - they include emphasis, focusing, rhythm and euphony. It must also be noted that these three constructions are rejected for some of the experience verbs which relativize DOs directly using the Su strategy; for example, mōhio 'know' rejects all three:

(4334) *I tūtaki a ia ki te tamaiti i mōhiotia e Rewi
 past meet pers he to the child past know-pass. by Rewi
 'He met the child that was known by Rewi'

(4335) *I tūtaki a ia ki te tamaiti nā Rewi i mōhio
 past meet pers he to the child by Rewi past know
 'He met the child Rewi knew'

(4336) *I tūtaki a ia ki te tamaiti a Rewi i mōhio ai
 past meet pers he to the child of Rewi past know pro
 'He met the child that Rewi knew'.

I have not found any other verbs that reject all three. The following table exemplifies typical judgements:

Construction:	passive	actor-emphatic	possessive
<u>pTrangi</u> 'desire'	✓	*	✓
<u>hiahia</u> 'desire'	✓	*	✓/?
<u>kite</u> 'see'	✓	?	*
<u>wareware</u> 'forget'	✓	*	*/?
<u>maumahara</u> 'remember'	✓	*	*/?
<u>mauahara</u> 'hate'	✓	*	*

Note: kite can also mean 'find', and it is possible that in this sense the actor-emphatic construction is grammatical, and that this interfered with judgements here; in the sense 'see', it seems likely that it is ungrammatical.

As was noted above, there are certain difficulties in assessing the grammaticality of (4308), repeated here for convenience:

(4337) *I hoko mai ia i te whare i hanga ai a Hata
 past buy hither he prep the house past build pro pers Hata
 'He bought the house which Hata built'.

Sentences constructed like this are rejected outright by some speakers, but a few accept them, equally without reservation. Biggs (1969, 122) gives a parallel example, Chung (1978, 72) and Chung and Seiter (1980, 631) claim that this is the standard structure for DO relativization, and yet I have not found a single textual example. Two possible explanations have been investigated. The first was that this might be a difference in regional dialects. This seems untrue, since speakers from both major dialect areas reject (4337), while others from both areas accept it. The second hypothesis is that it is a generation difference. This may have some truth in it, since those rejecting (4337) included all the older informants asked, and those accepting it were younger. However, some younger informants rejected it - though it is possible that they learnt Maori from e.g. their grandparents. If this is the case, then I postulate that the ai-strategy is moving up the hierarchy (see OBLs, 4.3.2.4). Dik (1978, 77) suggests that such changes may occur at cut-off points on hierarchies, a fact which will assume importance when the status of the ai-strategy is discussed (see 4.3.3 below).

This account of relativization of DOs is still far from complete, however, since the restrictions on the use of the Su-strategy hold only with respect to specific tenses, and a different set of options is available if the tense-marker of the relative clause is non-past. Thus we find the following:

(4338) ?Ka pai ia ki te kakara o ngā putiputi i hongī ia
 unspec good he to the scent of the(pl) flower past smell he
 'He liked the scent of the flowers he smelled'

(hongī does not appear to be a clear experience verb), but

(4339) Ka pai ia ki te kakara o ngā putiputi e
 unspec good he to the scent of the flower non-pt
 hongī rā a ia
 smell there pers he

'He likes the scent of the flowers which he smells'

both derived from

(4340)(a) Ka pai ia ki te kakara o ngā putiputi
 unspec good he to the scent of the(pl) flower
 'He likes the scent of the flowers'

and (b) I /e hongī ia ki ngā putiputi
 past non-pt smell he to the(pl) flower
 'He smelt/smells the flowers'.

(The variation between ia and a ia in Su position is determined by formality and medium, a ia being formal and written.) Similarly, the following are acceptable:

(4341) E hoko mai ana a ia i ngā kūmara
 pro- buy hither -gress pers he prep the(pl) kumara
 e whakatipu ana a Hata
 pro- cause-grow -gress pers Hata
 'He buys the kumaras Hata grows'

derived from

(4342)(a) E hoko mai ana a ia i ngā kūmara
 pro- buy hither -gress pers he prep the(pl) kumara
 'He buys the kumaras'

and (b) E whakatipu ana a Hata i ngā kūmara
 pro- cause-grow -gress pers Hata prep the(pl) kumara
 'Hata grows the kumaras';

- (4343) He mā ngā wai e inu nei tātou
 cls clean the(pl) water non-pt drink here we(incl,pl)
 'The water we drink here is clean'

derived from

- (4344)(a) He mā ngā wai
 cls clean the(pl) water
 'The water is clean'

- and (b) E inu tātou i ngā wai nei
 non-pt drink we(incl,pl) prep the(pl) water here
 'We drink the water here'.

Whakatipu and inu are unquestionably canonical transitives. The possibility of passivizing still exists in these cases, and indeed, is preferred. The actor-emphatic is also possible, using mā ... e, but seems to differ semantically from the passive, and the possessive strategy is also found, e.g.

- (4345) E hoko mai ana a ia i ngā kūmara
 pro- buy hither -gress pers he prep the(pl) kumara
 a Hata e whakatipu nei
 of Hata non-pt cause-grow here
 'He buys the kumaras Hata grows'

(cf. (4341)), but the ai which was obligatory in (4327) and (4328) has to be replaced here by nei, one of the deictic particles whose part in relativization is as puzzling as that of ai, and will be discussed more fully later (see 4.3.3 below).

It remains to note that further puzzling grammaticality judgements were received for certain sentences for which I can propose no clear explanation. The following were all rejected (note that they are non-past):

- (4346) *E pai ana ki a ia te whare e hanga
 pro- good -gress to pers he the house non-pt build
 mai a Hata
 hither pers Hata
 'He likes the house Hata is building'

derived from

- (4347)(a) E pai ana ki a ia te whare
 pro- good -gress to pers he the house
 'He likes the house'

- and (b) E hanga mai a Hata i te whare
 non-pt build hither pers Hata prep the house
 'Hata is building the house'

- (4348) *E pai ana ki a ia te tekoteko
 pro- good -gress to pers he the gable figurehead
 e whakāiro mai a J.T.
 non-pt carve hither pers J.T.
 'He likes the gable figurehead J.T. is carving'

derived from

- (4349)(a) E pai ana ki a ia te tekoteko
 pro- good -gress to pers he the gable figurehead
 'He likes the gable figurehead'

- and (b) E whakāiro mai a J.T. i te tekoteko
 non-pt carve hither pers J.T. prep the gable figurehead
 'J.T. is carving the gable figurehead'

- (4350) *E reka ana ki a ia te kai e mahi a ia
 pro- sweet -gress to pers she the food non-pt make pers she
 'She likes the food she is preparing'

derived from

(4351)(a) E reka ana kī a ia te kai
 pro- sweet -gress to pers she the food
 'She likes the food'

and (b) E mahi a ia i te kai
 non-pt make pers she prep the food
 'She is making the food'.

However, the insertion of one of the deictic particles, nei/nā/rā, improves them substantially, rā being the preferred particle in this context:

(4352) (?)E pai ana kī a ia te whare e hanga
 pro- good -gress to pers he the house non-pt build
 mai rā a Hata
 hither there pers Hata
 'He likes the house Hata is building',

and similarly for the other two. My informant added in respect of (4348) with rā added that if the 'he' did not see the carving being done, or if he saw the carving prior to speaking, the active form, as in (4348) would be inappropriate, and the passive required, despite the fact that no changes would be required in the tense/aspect markers used. This appears to indicate that discourse may impose additional restraints (and might conceivably have affected some of the grammaticality judgements reported here without my knowledge). In addition, the use of e ... ana instead of e in (4346) and (4348) also renders them grammatical, but (4350) similarly changed was still rejected. However, (4346) and (4348) with e ... ana were judged somewhat awkward, and the passive was preferred for them, and regarded as necessary for (4350).

Thus (4353) represents the only fully acceptable relative structure for (4350):

- (4353) E reka ana ki a ia te kai e
 pro- sweet -gress to pers she the food non-pt
 mahia e ia
 make-pass. by she
 'She likes the food that is being made by her'.

4.3.2.3 Relativization of IOs

The IO marker is ki, but this preposition, as has been shown, marks a variety of other types of NP, and it is far from clear that there is any justification for recognizing an IO slot in Maori.

However, consider

- (4354) Kāore te tamaiti i pātai (ai) te māhita
 not the child past ask pro the teacher
 i te whakarongo
 at(past) the cause-hear
 'The child that the teacher asked wasn't listening'

derived from

- (4355)(a) Kāore te tamaiti i te whakarongo
 not the child at(past) the cause-hear
 'The child wasn't listening'
- and (b) I pātai te māhita ki te tamaiti
 past ask the teacher to the child
 'The teacher asked the child'.

The relativization process here optionally includes ai; though this is not obligatory, it is preferred. If ai in (4354) is replaced

by atu rā 'away there' or atu nei 'away here', the result is as acceptable as the version with ai. We thus appear to have the Su strategy here, although the strong preference for one of these 'pro-forms' might provide some justification for regarding this strategy as different.

4.3.2.4 Relativization of OBLs

It appears necessary to distinguish two groups of OBL NPs, since the mā/nā-NP of the actor-emphatic behaves differently from other OBLs. The remainder are discussed first.

4.3.2.4.1 Mainstream OBLs

The strategy typical of OBLs may be illustrated by ki used as 'goal', e.g.

(4356) Ko Mokoia te moutere i kau atu ai a Hinemoa
eq Mokoia the island past swim away pro pers Hinemoa
i Rotorua
from Rotorua

'Mokoia is the island to which Hinemoa swam from Rotorua'.

derived from

(4357) (a) Ko Mokoia te moutere
eq Mokoia the island
'Mokoia is the island'

and (b) I kau atu a Hinemoa i Rotorua ki te moutere
past swim away pers Hinemoa from Rotorua to the island
'Hinemoa swam from Rotorua to the island'.

The sentence is judged ungrammatical without ai, although rā is a

possible substitute here. Now in 4.3.2.2, it was suggested that it might be possible to regard tūtaki 'meet' in (4318) as an intransitive verb with a goal complement, but it will now be seen that the relativization strategy usual for OBLs is different from that found with tūtaki. This solution must thus be rejected, and the problem remains one related to D0 relativization. It must also be noted that the IO discussed in 4.3.2.3 does not absolutely require the presence of ai or one of the deictics, as do OBLs. However, it strongly prefers this construction, as opposed to the ki-phrases of the experience verbs, which usually occur without these forms. It thus seems more reasonable to treat the IO as an OBL NP.

The question of whether the OBL strategy and the Su strategy are to be regarded as the same will be taken up again later, but here it remains to show that, contrary to what Keenan and Comrie suggest, (Keenan & Comrie, 1979, 342) the majority of OBL NPs do relativize.

With i as 'source' preposition, we find, e.g.

- (4358) Ko te kāinga i haere mai ai a ia he tawhiti
 top. the home past move hither pro pers he cls distant
 rawa i te tāone
 very from the town
 'The home he came from is a long way from town',

derived from

- (4359)(a) Ko te kāinga he tawhiti rawa i te tāone
 top. the home cls distant very from the town
 'The home is a long way from town'

- and (b) I haere mai a ia i te kāinga
 past move hither pers he from the home
 'He came from the home'.

It would be possible to have rā 'there' instead of ai, but one or the other is required.

With instrumental ki:

- (4360) Ko te tōki e tuaina nei e ia te rākau
 top. the axe non-pt cut-pass. here by he the tree
 he tōki pounamu
 cls axe greenstone

'The axe he is cutting down the tree with is a greenstone one'

derived from

- (4361)(a) Ko te tōki he tōki pounamu
 top. the axe cls axe greenstone
 'The axe is a greenstone one'

- and (b) E tuaina e ia te rākau ki te tōki
 non-pt cut-pass. by he the tree with the axe
 'He is cutting down the tree with the axe'.

Here the deictic nei is used, and it appears that ai is impossible because of the tense.

With the i-phrase of statives:

- (4362) Ko Tamahae te tamaiti i mau ai te tarakihi
 eq Tamahae the child past caught pro the tarakihi
 'Tamahae is the child who caught the tarakihi'

derived from

- (4363)(a) Ko Tamahae te tamaiti
 eq Tamahae the child
 'Tamahae is the child'

- and (b) I mau te tarakihi i a Tamahae
 past caught the tarakihi from pers Tamahae
 'The tarakihi was caught because of Tamahae'.

Again, rā would be possible. For these NPs, however, there is an alternative strategy, which will be discussed in 4.3.2.4.2.

With locative phrases:

- (4364) Kotahi tTni pea te tawhiti atu o te wāhi
 one chain perhaps the distant away of the place
 e wiki nei te wai i mua o te poti
 non-pt ripple here the water at(neut) the front of the boat
 'The place where the water is rippling is perhaps one
 chain in front of the boat',

derived from

- (4365)(a) Kotahi tTni pea te tawhiti atu o te
 one chain perhaps the distant away of the
 wāhi i mua o te poti
 place at(neut) the front of the boat
 'The place is perhaps one chain in front of the boat'

- and (b) E wiki te wai i te wāhi
 non-pt ripple the water at(neut) the place
 'The water is rippling at the place'.

Again, the tense demands nei, and not ai.

With the agent-phrase of passives:

- (4366) I te pō, ka puta mai te kēhua
 at(past) the night unspec appear hither the ghost
 i kukua ai ia
 past haunt-pass. pro he
 'At night, the ghost that he was haunted by appeared',

derived from

- (4367) (a) I te pō, ka puta mai te kēhua
 at(neut) the night unspec appear hither the ghost
 'At night the ghost appeared'

and (4367)(b) I kukua ia e te kēhua
 past haunt-pass. he by the ghost
 'He was haunted by the ghost'.

However, relativizing on the agent-phrase in passives is not always acceptable. Thus the following was rejected:

(4368) *He hoa nōku te wahine i patua ai
 cls friend my(sg) the woman past beat-pass. pro
 te tangata rā
 the man there
 'The woman by whom that man was beaten is a friend of mine',

derived from

(4369)(a) He hoa nōku te wahine
 cls friend my(sg) the woman
 'The woman is a friend of mine'

and (b) I patua te tangata rā e te wahine
 past beat-pass. the man there by the woman
 'That man was beaten by the woman'.

It appears to be the case that this is exceedingly difficult to process; informants were very confused as to who did the beating; kōhete 'scold' did not improve matters (despite the cultural stereotype of the scolding wife - the fact that (4368) is counter to the stereotype of battered wives cannot then be a sufficient explanation of the difficulties it produces). I hypothesize that it is possible to relativize on passive agents only when there can be no confusion about the underlying Su and DO. Thus in (4366), the ghost is the only possible Su for haunt, and it is thus acceptable. This only partially explains reactions to

- (4370) ??Ka mōhio au ki te kōtiro i waiatatia ai
 unspec know I to the girl past sing-pass. pro
 te waiata nei
 the song here
 'I know the girl by whom this song was sung',

derived from

- (4371)(a) Ka mōhio au ki te kōtiro
 unspec know I to the girl
 'I know the girl'

- and (b) I waiatatia te waiata nei e te kōtiro
 past sing-pass. the song here by the girl
 'This song was sung by the girl'.

This was still fairly strongly disliked, although undoubtedly easier to process than the previous example. This kind of variable grammaticality judgement - which is nonetheless constant across speakers - might be expected at a point on the hierarchy at which a strategy was about to cut off, and it is essential to bear this in mind for the discussion of whether or not the OBL strategy is the same as the Su strategy.

It must be added that mō 'about' uses a typical OBL strategy, as in

- (4372) Kua kitea e Rewi te ika i kōrero ai a Tamahae
 perf see-pass. by Rewi the fish past talk pro pers Tamahae
 'Rewi has seen the fish Tamahae talked about',

derived from

- (4373)(a) Kua kitea e Rewi te ika
 perf see-pass. by Rewi the fish
 'Rewi has seen the fish'

and (4373)(b) I kōrero a Tamahae mō te ika
 past talk pers Tamahae about the fish
 'Tamahae talked about the fish',

where either ai or rā is obligatory. However, mō can also be relativized on by promoting the mō-phrase to Su via the passive, and then using the Su strategy, as in

(4374) Kua kitea e Rewi te ika i kōrerotia e Tamahae
 perf see-pass. by Rewi the fish past talk-pass. by Tamahae
 'Rewi has seen the fish that was talked about by Tamahae'.

This option does not appear to be available for IOs or any other OBL NPs, and suggests that of the OBLs, mō-phrases are the most accessible to relativization, and may be treated as DOs.

In the light of Keenan & Comrie's claims (1979, 342) about OBLs, it is necessary to add here that specific prepositions such as on, under, over are complex in Maori, having the form

preposition + locational noun + preposition

where the locational noun is one of the small group including runga 'the top', raro 'the bottom', roto 'the inside' etc. (see e.g. Biggs, 1969, 41). They form phrases of the kind

ki/i	/kei	+ runga + i	/o /ki
to ^(from)	at ^(pres)	(from)	of to
(at)		(at)	

e.g.

(4375) Ko te paraoa kei runga i te tēpu
 top. the bread at(pres) the top at(neut) the table
 'The bread is on the top of the table', 'The bread
 is on the table'.

It is clear that i te tēpu is adnominal, and thus seems to be a type

of genitive. Accordingly, the discussion of such relative clauses is treated in 4.3.2.5. The example Keenan and Comrie give of relativization of an OBL is rejected by my informants, and I could not even elicit a guess as to its meaning. (I refer to their example (69), given here with orthography and glosses which conform to those in the present work:

- (69) te tēpu kei hea a Hone kua meatia te paraoa
 the table at(pres) where pers John perf put-pass. the bread
 'the table where John put the bread'.)

It looks to me like the kind of Maori one might expect from a not very successful learner with English as their mother tongue. This is rather worrying, since it points to a failure in Keenan & Comrie's data collection techniques, and raises the question as to how much of their data is subject to such inaccuracy.

Tense produces one complication here, just as it did with DO relativization. All the examples of the OBL strategy given above show that either ai or one of the deictic particles nei/nā/rā is obligatory. There is one exception to this: these particles cannot occur if the tense/aspect marker in the relative clause is the discontinuous progressive marker, e ... ana. Thus we find

- (4376) Ka whakatata ngā poti o Te Kaha, o Maungaroa,
 unspec cause-near the(pl) boat of Te Kaha of Maungaroa
 ki te wāhi e kau ana te ika rā
 to the place pro- swim -gress the fish there
 'The boats of Te Kaha and Maungaroa neared the place
 where the fish was swimming',

derived from

- (4377) (a) Ka whakatata ngā poti o Te Kaha, o
 unspec cause-near the(pl) boat of Te Kaha of
 Maungaroa ki te wāhi
 Maungaroa to the place
 'The boats of Te Kaha and Maungaroa neared the place'

- and (b) E kau ana te ika rā ki te wāhi
 pro- swim -gress the fish there to the place
 'The fish was swimming at the place'.

Note that the final rā in (4376), te ika rā forms a demonstrative; it is not in the immediate post-verbal position of the rā which alternates with ai. It is impossible in (4376) to have ... e kau ana rā te ika rā. Similarly,

- (4378) Kei te titiro rātou ki te wāhi e heke
 at(pres) the look they(pl) to the place pro- climb
 iho ana te tamaiti
 down -gress the child
 'They are looking at the place the child is descending from',

derived from

- (4379) (a) Kei te titiro rātou ki te wāhi
 at(pres) the look they(pl) to the place
 'They are looking at the place'

- and (b) E heke iho ana te tamaiti i te wāhi
 pro- climb down -gress the child from the place
 'The child is descending from the place'.

No deictic or ai can be added to (4378). A possible explanation of this discrepancy is discussed in 4.3.3 below.

4.3.2.4.2 Relativization of the Actor-emphatic NP

A clearly case-coding strategy occurs in such sentences.

The discussion here, as elsewhere, is limited to examples of the construction with the prepositions mā and nā. The basic relativization strategy applying to the actor-emphatic NP is illustrated by

- (4380) Kua tae mai te kōtiro nāna i hoko mai
 perf arrive hither the girl by-she past buy hither
 ngā whurutu
 the(pl) fruit
 'The girl who bought the fruit has arrived'.

(Note that no English translation can adequately render the emphasis of the Maori.) Here, there is a pronominal copy, -na in the example above, remaining in the relative clause, cliticized to the preposition nā. This is undoubtedly a case-coding strategy, since the preposition remains with the pronoun in the relative clause. These clauses are judged ungrammatical if ai is inserted. However, the deictic particles are not excluded if the preposition is nā rather than mā. Thus we find

- (4381) Mahue mai ana ngā waka e hari rā
 leave hither indeed the(pl) canoe non-pt carry there
 i ngā tāngata nāna nei i tīnihanga a
 prep the(pl) men by-he here past cheat pers
 Te Tai
 Te Tai
 '[He] left behind the canoes which carry the men who
 tricked Te Tai',

derived from

- (4382) (a) Mahue mai ana ngā waka e hari
 leave hither indeed the(pl) canoe non-pt carry
 rā i ngā tāngata
 there prep the(pl) men
 '[He] left behind the canoes which carry the men'

and (b) Nā ngā tāngata i tinihanga a Te Tai
 by the(pl) men past cheat pers Te Tai
 'The men tricked Te Tai';

- (4383) Kei hea te tangata nāna rā i pupuhi te pūru?
 at(pres) where the man by-he there past shoot the bull
 'Where is the man who shot the bull?'

derived from

- (4384) (a) Kei hea te tangata?
 at(pres) where the man
 'Where is the man?'

and (b) Nā te tangata i pupuhi te pūru
 by the man past shoot the bull
 'The man shot the bull';

- but (4385) *Ko wai te tangata pai māna nei/nā/rā e waiho
 eq who the man nice by-he here/there non-pt leave
 tana koti ki konei?
 his(sg) coat to here
 'Who is the kind man who will leave his coat here?'

derived from

- (4386) (a) Ko wai te tangata pai?
 eq who the man nice
 'Who is the kind man?'

and (4386)(b) Mā te tangata e waiho tana koti ki konei
 by the man non-pt leave his(sg) coat to here
 'The man will leave his coat here'.

(4385) is entirely grammatical if nei/nā/rā is omitted. This restriction may well have a semantic explanation, in that mā is largely restricted to future reference, and thus deals with non-existent events, which cannot be located in relation to the speaker/hearer by the use of one of the deictic particles.

As mentioned above (see 4.3.2.4.1), however, certain other OBLs have the alternative of using this strategy. Thus beside (4363) there is also

(4387) Ko Tamahae te tamaiti i mau nei i a ia
 eq Tamahae the child past caught here from pers he
 te tarakihi
 the tarakihi
 'Tamahae is the child who caught the tarakihi',

derived from (4363)(a) and (b). Here the pronoun ia is retained in the relative clause, accompanied by the preposition i. However, it is not possible to use this strategy for all OBLs. The personal pronouns in Maori are restricted to personal or personified referents, and there is no pronoun which refers anaphorically to things or places. Nor is it true that this strategy is available for all clauses with personal NPs in the requisite places. Thus this strategy was rejected by most informants for (4368). Only one informant judged the following an improvement on (4368):

(4388) He hoa nōku te wahine i patua e ia
 cls friend my(sg) the woman past beat-pass. by she

te tangata rā

the man there

'The woman by whom that man was beaten is a friend of mine'

despite my expectation that this would identify the roles of the NPs, and thus reduce the confusion produced by (4368). The pronoun-retaining strategy does, however, occur with notional IOs:

(4389) Ko tēnei te tangata nāku i hoatu ki a ia te pukapuka
eq this the man by-me past give to pers he the book

'This is the man to whom I gave the book'.

It was rejected for DOs or Sus. This is one of the situations for which Keenan and Comrie used a +/- entry: the strategy is sometimes possible and sometimes not; factors other than the grammatical relation (here humanness) are relevant. While this seems a satisfactory account of the use of the pronoun-retaining strategy amongst OBLs, it does not seem as satisfactory to handle the ai-strategy in this way, since that is possible for all OBLs with the exception of the mā/nā NP of the actor-emphatic, which requires the pronoun-retaining strategy. Since the pronoun-retaining strategy provides more information about the NP relativized on, this suggests that it is more difficult to relativize the actor-emphatic NPs than other OBLs. In situations such as this, it is difficult to see the relevance of the grammatical relation OBL, since it is not true that all OBLs behave alike. While it is not true that the patterns of accessibility to relativization are sufficient to establish grammatical relations, it seems likely that behaviour splits of this kind are not confined to relativization, and this in turn must undermine the plausibility of any theory

in which grammatical relations are taken as primitives.

There is one argument which might explain why these mā/nā NPs behave differently from other OBLs: under Chung's analysis, they function predicatively, and thus no theory of grammatical relations makes any prediction about the relativization strategy which might be expected. Other prepositions used predicatively do not readily lend themselves to relativization, but it appears that the ai-strategy is never possible in non-verbal contexts. Thus the mā/nā-NPs might not constitute an exception to the OBL rule.

4.3.2.5 Relativization of Genitives

The only genitives which appear to relativize without exception are the locatives mentioned in 4.3.2.4.1. Thus we find

- (4390) Ko tēnei te tēpu i waiho ai e Hone te paraoa ki runga
 eq this the table past leave pro by John the bread to the top
 'This is the table on which John put the bread',

derived from

- (4391) (a) Ko tēnei te tēpu
 eq this the table
 'This is the table'

- and (b) I waiho e Hone te paraoa ki runga i
 past leave by John the bread to the top at(adnom)
 te tēpu
 the table
 'John left the bread on the table'.

(Waiho appears to allow passive grammar without undergoing modification

of its stem, although waihoa and waihotia are sometimes found.)

Similarly,

- (4392) Ko tēnei te tēpu i whakatū ai a Hone i
 eq this the table past cause-stand pro pers John prep
 te pounamu ki raro
 the bottle to the bottom
 'This is the table under which John stood the bottle',

derived from

- (4393)(a) Ko tēnei te tēpu
 eq this the table
 'This is the table'

- and (b) I whakatū a Hone i te pounamu ki
 past cause-stand pers John prep the bottle to
 raro i te tēpu
 the bottom at(adnom) the table
 'John stood the bottle under the table'.

This is virtually identical to the sentence for which Keenan & Comrie report (1979, 342) "no natural translations were obtained". (4390) and (4392) were both elicited, but such examples also occur in texts, e.g.

- (4394) Ka noho ia i tētahi rākau e
 unspec sit he at(neut) a certain tree non-pt
 noho nei he tāngata i raro
 sit here some men at(neut) the bottom
 'He sat in a tree under which some people were sitting',

derived from

- (4395)(a) Ka noho ia i tētahi rākau
 unspec sit he at(neut) a certain tree
 'He sat in a tree'

and (4395)(b) E noho he tāngata i raro i
 non-pt sit some men at(neut) the bottom at(adnom)
 te rākau
 the tree

'Some people were sitting under the tree'.

Note that in all these examples either ai or one of the deictics appears, as we saw for the OBLs. This distinguishes such adnominal locatives from genitives proper, to which we now turn.

As examples of relativization of genitives, consider the following:

(4396) I kaute ia i ngā tamariki kua eke ngā
 past count he prep the(pl) children perf reach the(pl)
 tau ki te tekau mā tahi
 year to the ten and one

'He counted the children whose age had reached eleven',

derived from

(4397)(a) I kaute ia i ngā tamariki
 past count he prep the(pl) children
 'He counted the children'

and (b) Kua eke ngā tau o ngā tamariki ki
 perf reach the(pl) year of the(pl) children to
 te tekau mā tahi
 the ten and one

'The ages of the children had reached eleven';

(4398) He aha te ingoa o te wāhi e waru maero te
 a what the name of the place non-pt eight mile the
 tawhiti atu i Te Araroa?
 distant away from Te Araroa

'What is the name of the place whose distance away from
 Te Araroa is eight miles?'

derived from

- (4399)(a) He aha te ingoa o te wāhi?
 a what the name of the place
 'What is the name of the place?'

- and (b) E waru maero te tawhiti atu o te wāhi i
 num eight mile the distant away of the place from
 Te Araroa
 Te Araroa

'The place is eight miles away from Te Araroa'.

It appears that only statives, intransitives, and non-verbal sentences can readily form such relative clauses. Thus the following are doubtful or ungrammatical:

- (4400) *Ka mātakitaki a Mārama i te tamaiti i
 unspec gaze pers Marama prep the child past
 ngau (ai) te hōiho i a Rewi
 bite pro the horse prep pers Rewi
 'Marama gazed at the child whose horse had bitten Rewi'

derived from

- (4401)(a) Ka mātakitaki a Mārama i te tamaiti
 unspec gaze pers Marama prep the child
 'Marama gazed at the child'

- and (b) I ngau te hōiho o te tamaiti i a Rewi
 past bite the horse of the child prep pers Rewi
 'The child's horse bit Rewi';

- (4402) ?Kua rere atu ngā manu i rongona te tangi
 perf fly away the(pl) bird past hear-pass. the sound
 (ai) e Rewi
 pro by Rewi

'The birds whose song Rewi listened to flew away',

derived from

- (4403)(a) Kua rere atu ngā manu
 perf fly away the(pl) bird
 'The birds flew away'

and (b) I rongona te tangi o ngā manu e Rewi
 past hear-pass. the sound of the(pl) bird by Rewi
 'The sound of the birds was listened to by Rewi'.

However, more crucial than the restrictions is the strategy used here in the acceptable cases: it is the Su strategy, and the addition of ai is judged ungrammatical. Deictic particles occasionally occur, but are not ever required.

The pronoun-retaining strategy is also available here for personal referents. Thus, alternating with (4396), but not preferred, is

- (4404) I kaute ia i ngā tamariki kua eke ō
 past count he prep the(pl) children perf reach of(pl)
 rātou tau ki te tekau mā tahi
 they(pl) year to the ten and one
 'He counted the children whose age had reached eleven'.

This alternative does not exist for (4398).

Again, the grammatical relation GEN shows split patterning.

It might be argued that the adnominal locatives are really OBLs, which would account for the strategy they require; the split in the GENs would thus be more apparent than real. Such a move, however, raises problems for the identification of grammatical relations: if the grammatical relation of an NP is determined by the pattern it follows with respect to relativization and other syntactic processes, then grammatical relations cannot be primitives in the theory.

4.3.2.6 Relativization of OCOMPs

These are also open to relativization, as the following shows:

(4405) Ko te tamaiti he iti iho a Rewi i a
 top. the child cls small down pers Rewi compar pers
 ia he koretake
 he cls good-for-nothing

'?The youth that Rewi is smaller than is a good-for-nothing',

derived from

(4406) (a) Ko te tamaiti he koretake
 top. the child cls good-for-nothing
 'The child is a good-for-nothing'

and (b) He iti iho a Rewi i te tamaiti
 cls small down pers Rewi compar the child
 'Rewi is smaller than the child'.

This is, of course, the pronoun-retaining strategy, and is the only one available. It should perhaps be noted that although such sentences raise a smile, since the obvious way of expressing this is to turn it round, as in English, there does not appear to be any doubt as to the grammaticality of the result. It presumably applies only to personal referents, though.

4.3.3 The function of ai and the deictic particles

It will be clear from the above discussion that it is crucial to establish the part played in relativization by these particles, in order to establish how many strategies must be recognized in Maori, and in order to assess the extent to which Maori presents evidence of discontinuous strategies.

It is clear from the distribution of these particles that they are not case-coding in Keenan & Comrie's sense: they do not unequivocally code one particular case. From this, Keenan & Comrie conclude that the strategy is therefore the same as the non-case-coding strategy, i.e. the Su-strategy, which thus extends down the hierarchy as far as GEN, although it is inapplicable to the DOs of canonical transitives for many speakers (except via promotion to Su) and to certain GENs, and possibly inapplicable to certain OBLs. However, it seems to me that to regard the ai-strategy as such is to overlook certain important ways in which it differs from the subject strategy. Keenan & Comrie's justification of their criterion lies in the fact that it enables them to make generalizations across languages; but if generalizations are obtained by overlooking features which may be of importance language-internally, there would seem to be no principles which would determine the choice of features, and thus the value of the generalizations found. It seems crucial to an understanding of Maori relativization to examine the evidence that these forms are pro-forms, and if they are not, to look for an alternative explanation for the part they play in Maori. In Maori, there seems to be a significant difference in the ease of relativization of Sus, which require no marker of their absence in the relative clause, and the ease of relativization of OBLs, which require the addition of one of these particles. Such a pattern would seem to be entirely in keeping with the spirit of Keenan & Comrie's proposals, and it seems a little odd that their criteria do not allow them to recognize this pattern in Maori.

As mentioned above (see 4.3.2.1), the linguists who have discussed this area of Maori grammar recently, notably Chapin, Chung, and Chung

and Seiter, have argued or assumed that ai is a pro-form. Chapin, summarizing his findings on Proto-Polynesian *ai, based on a study of ai in a large variety of Polynesian languages including Maori, writes (1974, 259)

Anaphoric *ai ... was a substitute for a noun phrase which was in an oblique case (or an adverbial prepositional phrase, if a distinction is to be drawn) and which was identical to and coreferential with some other noun phrase in the same sentence or a preceding sentence. The noun phrase repetition could arise either in the ordinary way or as a result of transformational copying rules.

Not all his data comes from relative clauses, but it is clear that the use of ai in relative clauses is one of the instances he classes under this head. The parallels between the use of ai in Maori and other Polynesian languages, where the function is apparently less open to doubt, provide the major source of positive evidence for a pro-form function. (Chapin is not concerned with the deictic particles, and his conclusions do not necessarily generalize to them.) Native speakers cannot confirm this description of the use of ai; they appear to have no clear understanding of its function, though their use of it appears largely consistent with this hypothesis.

Chung and Seiter (1980, 631) claim that ai is a "non-subject anaphor" when it appears in relative clauses on OBLs (and DOs, since they regard the ai-strategy as the norm for DOs).

There are a variety of facts which seem to argue against this analysis. Perhaps the most convincing is the fact that ai appears to be restricted in the tenses it can co-occur with: basically, it occurs with past tenses, but not with non-past. No other pro-form in Maori shows sensitivity to tense. It is not clear that this argument extends to the deictics, since it appears that at least one of

them is appropriate with any given tense. The restriction against any of them occurring with e ... ana is not, I think, a counter-example here, and I propose an explanation below for this restriction (see 4.3.3.1).

A second factor which must be taken into account is that there are sometimes special semantic consequences of the choice between ai and a deictic, and these are not the sort of differences that would normally be associated with anaphoric pronouns. Consider the following cases:

- (4407) Ko Pōneke te wāhi e tū rā/nā/nei
 eq Wellington the place non-pt stand there/here
 te whare Pāremata
 the house Parliament
 'Parliament House is in Wellington',

derived from

- (4408)(a) Ko Pōneke te wāhi
 eq Wellington the place
 'Wellington is the place'

- and (b) E tū te whare Pāremata
 non-pt stand the house Parliament
 i te wāhi
 at(neut) the place
 'Parliament House stands at the place'

- (4409) Ko Pōneke te wāhi e tū ai te
 eq Wellington the place non-pt stand pro the
 whare Pāremata
 house Parliament
 'Parliament House is to be in Wellington' (or

more literally, 'Wellington is the place where
the Parliament House is to stand').

Thus there appears to be a distinction of tense associated with
the selection of a deictic or ai here: ai implies that the relative
clause represents an unfulfilled proposition. However, the dis-
tinction is not always the same, e.g.

- (4410) Nō Hata te whare i tomo atu ai au
belong Hata the house past enter away pro I
'The house I entered belongs to Hata'

derived from

- (4411)(a) Nō Hata te whare
belong Hata the house
'Hata owns the house'

- and (b) I tomo atu au ki te whare
past enter away I to the house
'I entered the house'

- (4412) Nō Hata te whare i tomo atu rā au
belong Hata the house past enter away there I
'The house I entered belongs to Hata'.

Here it is impossible to gloss the difference, but informants seem
to agree that (4410) leads to expectations that it will be completed
with an explanation of the reason for entry, and (4412) is judged
the more suitable as a translation of the English. Ai occurs
commonly in clauses of reason in Maori, and this example might
be explainable as an instance of interference from such constructions.
However, such semantic differences appear to be the exception rather
than the rule: no such difference was elicited for the alternation

in examples (4354)-(4366), for instance. It seems unlikely that such variable differences as these would be associated with pro-forms.

Thirdly, it is necessary to consider the semantics of the deictics. It seems semantically highly plausible that deictic particles, which refer to places in relation to the speaker/hearer, could serve as pronominal copies in locational sentences, especially since the personal pronouns in Maori are not available to do this job. However, the deictics occur in certain OBL contexts which are clearly non-locational, e.g. with instrumental phrases or with the agent phrase in the passive. They can indeed occur in contexts where the referent is personal, and it seems unlikely that Maori, which makes a constant difference between personal and non-personal NPs, would use such forms as pro-forms for personal referents. The majority of native speakers, when asked to specify what is located by these particles, claim that it is the place of the action, just as when these particles occur in main clauses. Thus in (4360), for example, it is the cutting rather than the axe which is located near the speaker. This suggests the deictics are not seen as pro-forms for the deleted NPs.

It is not entirely clear to me whether the occurrence of the deictics in the actor-emphatic construction with nā is of a non-functional kind, or whether it is of the kind found with the remainder of the OBLs. While they are not compulsory with nā, they usually do occur. If their appearance there is functional, then it is quite clear that a pro-form interpretation is improbable. It will be recalled that the nā strategy involves the compulsory

retention of a cliticized personal pronoun, whose function is not in doubt. Since the deictics occur in addition, they are unlikely to be providing a second anaphoric reference to the same antecedent. Now it could be argued that the fact that ai cannot occur in this context, and is judged ungrammatical if included, is evidence that it is a pro-form, since the ungrammaticality could be explained by the improbability of having two anaphoric pronouns side by side referring to the same antecedent. Ai would thus have a function different from the deictics. (Notice that nā always requires the tense marker i, with which ai normally co-occurs.) The consequences of accepting this argument do not seem satisfactory, however. It would involve the claim that the relativization of OBLs involved the obligatory use of a pro-form OR a deictic with some other function. A rule of this kind would seem highly unlikely. It seems more reasonable to conclude, therefore, that the occurrence of the deictics in this construction is non-functional.

Chung and Seiter (1980, 631, fn5) briefly consider the function of ai and the deictics in examples of Su relativization, and conclude that they "do NOT stand for relativized Subjects" (their emphasis). They continue, "We believe that they indicate that the entire relative clause forms part of a (complex) NP." They do not, however, take the matter any further. It is not clear why such a structural indicator should be optional - it would perhaps be expected that such a function would be obligatory. Nor is it obvious why this function should be performed by ai or the deictics, dependent on tense. Again, it seems a little odd that forms which they consider anaphors in OBL relativization should have a different function

In Su relativization.

It will be seen that the arguments are not conclusive.

The major arguments for ai as a pro-form involve the data discussed by Chapin, and the parallels with other Polynesian languages, together with the fact that either ai or a deictic is obligatory in relativizing on OBLs. On the other hand, the tense restrictions and the semantic variation would suggest that these forms have some other function. It is impossible to know how to weight such disparate factors relative to one another.

4.3.3.1 Phonetic Considerations for Deictics

In this section, I put forward a tentative suggestion for the occurrence of the deictic particles in contexts where they are optional. This involves a consideration of stress assignment in Maori.

Biggs discusses stress in Maori in a number of places, e.g. 1966, 13-14 and 1969, 132-133. For the majority of words, word stress is predictable on the basis of the patterning of the vowels in a word. Biggs also implies that phrase stress is predictable, giving the following rules (1969, 133):

Phrase stress occurs once in each phrase in normal speech ... In sentence-final phrases the phrase stress occurs on the last base in the phrase as determined by the rules for [word] stress ... In non-final phrases, however, the phrase stress occurs on the last syllable in the phrase if that syllable contains more than one vowel, otherwise on the second to last syllable.

There are certain exceptions mentioned, for instance that particles with only one vowel are never stressed. In addition, Biggs states (1971, 471) that in final phrases the stress falls preferably three

to four syllables from the end of the phrase, and that extra syllables are often added to achieve this patterning. The deictic particles under discussion here (as well as other directional particles) are amongst those used for this purpose.

There is no reason to doubt the accuracy of Biggs's statements with respect to final phrases, but my data suggests that in the vast majority of cases, in present-day Maori, the rules for non-final phrases do not differ from those for final phrases, and that the rule quoted above leads to unacceptable stress assignments, ones which native speakers have great difficulty in copying.

I shall therefore assume in this discussion that the rules for stressing final phrases also apply to non-final phrases, at least in the cases discussed here. (It may be the case that Biggs's rules apply to phrases containing certain lexical items only, since my informants have all agreed with the stress assignments given by Biggs to his sentences illustrating the above rule.)

It appears that not only final phrases have the stress three to four syllables from the end, although the tendency to supply extra syllables is undoubtedly found most regularly in sentence-final position. The hypothesis put forward here is that the optional deictics are to be accounted for as the result of this phonological constraint. A word on the definition of a syllable is needed: it has the form (C)V(V) to judge from the examples given by Biggs in the sources cited above. Note, however, that there are a number of processes in Maori which must be stated in terms of the number of morae, where a mora has the shape (C)V (where the V is a short vowel only) (see Bauer, forthcoming), and not in terms of syllables, as defined above.

Consider first the phonological structure of the nā-phrase of the actor-emphatic in a relative clause, as illustrated in (4380)-(4385). These have the phrase-stress pattern

'nāna,

and there is only one unstressed syllable after the stress.

Now if a deictic is added, the pattern becomes

'nāna nei,

and the stress now falls three syllables from the end. (The deictic does not lose its word stress, but this is realized as secondary stress, and will not be indicated here.) It is therefore suggested that the commonness with which the deictics occur in these phrases is due to the fact that they supply the preferred phonological pattern. However, the mā-phrases do not have this option available because of semantic inappropriateness, and so normally occur without any extra syllables. When asked about the grammaticality of nā-relatives without deictics, native speakers on more than one occasion have responded "It sounds incomplete to my ear" (rather than "It sounds wrong"), and this might be taken to support this hypothesis.

As well as accounting for the non-obligatory occurrences of the deictics, this hypothesis offers a possible explanation for the fact that none of these particles co-occurs with e ... ana. Consider the relevant phrases of (4376) and (4378):

e 'kau ana

e 'heke iho ana.

In the first, the stress is three syllables from the end, and in the second, it is six syllables from the end. The addition of

a deictic would add a syllable, in both cases unnecessarily. This would not produce a surfeit of syllables in the first example, but the presence of ana alone is sufficient to ensure that the preferred pattern is always present. Although it is possible to exceed two syllables after the stressed one, as the second instance shows, it may be possible only if those syllables are produced by semantically indispensable items (iho differentiates 'ascend' and 'descend', and ana differentiates e ... ana and e 'non-past'). If this explanation is correct, then with the relativization of mainstream OBLs, it would be necessary to postulate that the obligatory ai or deictic is deleted if its occurrence leads to an excess of unstressed syllables at the end of the phrase. Note that if such particles did occur in this construction, they would have to precede ana, which apparently cannot be stressed, and thus they could not initiate a new phrase, which appears to happen in other instances where they would produce an excess of syllables. Thus if (4378) was

i 'heke iho 'rā,

it would have two stresses, as indicated. (This may involve only one intonation contour, and constitute a complex stress, rather than two independent stresses, but the important thing for this discussion is that this pattern is not available for e ... ana.)

To this point, we have not considered to what extent this may account for the optional occurrences of ai, for instance those with *Sus* and the DOs of experience verbs. Ai is not mentioned by Biggs as one of the forms with a phrase-filling function.

However, Chapin suggests that ai is normally limited in its anaphoric use to OBL phrases (1974, 259). Thus it might be suggested that in other contexts, where it could not be misinterpreted, it could have a phrase-filling function. Su and DO relatives would provide such contexts. Thus it might be possible to explain the occasional occurrences of ai in such structures in that way. Consider the relevant phrases of (4302), (4304) and (4320):

i 'pūhia ai

i 'kohia ai

i 'pTrangi ai.

In the first two, the stress is now three syllables from the end, and in the third, four. Interestingly enough, an informant asked to read (4320) with and without ai phrased the two versions differently, thus:

i 'pTrangi ai 'ia

i 'pTrangi ia.

Thus when ai was not present, the subject pronoun ia was incorporated into the phonological phrase containing the verb, but when ai was introduced, it became a separate phrase. This argument is not very strong, however, since there are many examples which do not have the preferred phonological form, but which nevertheless occur without these added syllables. If it is a plausible explanation, then phonetic considerations could account for all the non-obligatory occurrences of these particles.

4.3.3.2 Evidence that the ai-strategy ≠ Su-strategy

If the evidence of the preceding section is accepted, then

the ai-strategy occurs with the D0-possessive construction, with OBLs, and with locative-genitives. In addition, for some speakers, it appears with the DOs of canonical transitives. In all these cases, it is obligatory, and sentences without ai or deictics are judged ungrammatical. There would now seem to be a rather clearer case for regarding this as different from the Su-strategy. It might be claimed that the ai or deictic encodes the OBL relation, and that it is thus weakly case-coding, or perhaps grammatical-relation coding. Keenan & Comrie do not recognize such a possibility: for them the ai-strategy is not case-coding, and is therefore indistinguishable from the Su-strategy. The necessity for cross-linguistically applicable criteria forced them to ignore many details of relativization in individual languages. It is possible, by ignoring certain details of relativization in Maori, to make Maori fit the hierarchy generalizations they propose. To do so is also to ignore the fact that in several respects the data from Maori calls the validity of those generalizations into question. It seems to me that any description of relativization in Maori alone must distinguish the ai- and Su-strategies.

Apart from a consideration of the internal differences between the Su- and ai-strategies, some evidence that they may be different can be gleaned from looking at the way in which they pattern on the NP hierarchy. In particular, if Keenan and Comrie's HCs are valid, then evidence of cut-off behaviour might provide evidence for regarding the strategies as different. Evidence pertaining to the Su-strategy is considered first.

It appears to be typical of cut-off points that there may

be erratic judgements there, or that only certain classes of NPs will participate. Several such phenomena are observed with the Su-strategy. First, of the DOs, only one class, namely those of experience verbs, can occur with this strategy for all speakers. Secondly, with the DOs of canonical transitives, grammaticality judgements vary according to tense (see (4339)-(4343) and (4346)-(4353)), and as the second of these sets shows, judgements also vary in unexplainable ways. In addition, the Su-strategy appears occasionally with notional IOs. If it is posited that the Su-strategy cuts off in the middle of the DOs, then these facts have a natural explanation. If, on the other hand, the Su-strategy continues beyond OBL, then these facts are unexpected, and very difficult to account for. The low accessibility of Maori DOs to relativization cannot be swept under the carpet, even if the Su- and ai-strategies are equated.

Rather similar evidence is available for the ai-strategy. Consider the situation with the relativization of the e-phrase in passives. Some examples are accepted, but not all. The relevant factors appear to be related to ease of interpretation (see the discussion of (4366)-(4370)). Thus there would seem to be typical cut-off point uncertainties for the ai-strategy at the end of the mainstream OBLs. The acceptability of the ai-strategy to some speakers for the DOs of canonical transitives may also provide evidence of a starting point for this strategy. If it is indeed correct that this represents an innovation, then it could be explained as the extension upwards of the ai-strategy to the class next above on the hierarchy. This explanation is not available,

however, if the ai-strategy and the Su-strategy are the same.

The weight of the available evidence thus seems to point to the conclusion that these two strategies are different, and this will be assumed in the next section.

4.3.4 Summary of Hierarchy Problems

A glance at Table I (p.407) will show that there are a number of places on the hierarchy where Maori appears to show discontinuous strategies. The problems presented by each strategy will be discussed in turn.

4.3.4.1 Discontinuities with the Su-strategy

It must first be noted that the arrangement of the information in the Table makes the position seem considerably worse than it is. The four sub-categories of canonical DOs are somewhat out of place, since (i) and possibly (ii) are equivalent to Su, (iv) by definition is not the Su-strategy, and (iii) has no obvious place on the hierarchy. Thus the IO position occurs at the end of the clear cases of the Su-strategy, and represents the lowest possible extent of the strategy.

The real problem for the Su-strategy, then, is its occurrence with the non-locative genitives. As the examples show (see (4396)-(4402)), when relativization is acceptable, the Su-strategy is unquestionably the one used. It must be noted, however, that the fact that it is not always possible suggests that the strategy reaches a cut-off point here. The generalization that strategies will apply to continuous segments of the hierarchy is preserved

by calling the Su-strategy and the ai-strategy the same. This does not seem to me an acceptable solution, unless there is independent evidence for it, and I have found none. The Su-strategy in Maori thus appears to provide a counter-example to the generalization.

4.3.4.2 Discontinuities with the ai-strategy

Again, the positioning of the DO-possessive strategy in the Table must be commented upon. Placed as it is, it produces a continuous area of the hierarchy subject to the ai-strategy. However, there is no obvious position for it, and it is conceivable that it might create a discontinuity. This will not be discussed, however, as there is no evidence that could be brought to bear on the problem.

The discontinuity created by the mā/nā-phrases and the locative-genitives may or may not be an artefact of the Table as it stands. There are two possible lines of argument which might lead to re-arrangement of these NPs in such a way that they no longer create a discontinuity. It might be argued that the locative-genitives are semantically OBLs, even though they are grammatically genitives. They usually appear with prepositions typical of OBLs, especially i, rather than the typical genitive prepositions o and a. However, as far as I know, there is always a choice: the underlying structures given for (4390)–(4394) could all equally well have o instead of the i given. It might also be suggested that the fact that they all allow relativization, unlike other genitives, makes them more like OBLs than GENs. These arguments do not seem very convincing, but might be ways out of the discontinuity problem.

TABLE I

Strategy	Su-strategy	<u>Ai</u> or deictics (never with e ... ana)	Pronoun-retention (animate referents only)	Comments
Su	✓	occasionally, opt	*	
DO - Experience	✓	occasionally, opt	*	
- Canonical				
(i) passive	✓	occasionally, opt	*	
(ii) actor-emph	✓	*	*	
(iii) possessive	*	✓	*	
(iv) ?ai-strategy	*	✓	*	not acceptable to all speakers
IO	occasionally	✓	occasionally	
OBL - Mainstream	*	✓	occasionally	
- mā/nā	*	*	✓	deictics with nā only
GEN - Locatives	*	✓	*	
- Others	✓	*	occasionally	
OCOMP	*	*	✓	

Notes: ✓ - regularly, * - not found

It appears that the deictics can in fact occur anywhere except with mā in the actor-emphatic.

They are not recorded for those positions where they are apparently non-functional. See discussion.

Additionally, it might be argued that the mā/nā-NPs are out of place on the hierarchy. It is possible, for instance, that this structure should not be included among the "basic" structures, and if it is not "simplex", then Keenan and Comrie make no claims about it. There does not appear to be any independent support for any of the positions which would remove the discontinuity produced by these NPs, i.e. preceding Su, following GEN, or following OCOMP. Shimizu (1975, 534) has pointed to the problem of incorporating topics in Japanese into the hierarchy, and it may be that the problem here is of a somewhat similar kind.

Alternatively, the mā/nā-NPs may be predicative, and thus the theory makes no prediction about the relativization strategies which apply. Note, however, that the discussion of the actor-emphatic was inconclusive in this regard (see 4.2.26).

4.3.4.3 Discontinuities with the pronoun-retention-strategy

Superficially, at least, this strategy appears to operate anything but continuously. Plainly, if the re-arrangements discussed in 4.3.4.2 took place, the picture would look rather less problematic. However, the lack of independent evidence for these suggestions leaves the possibility that Table 1 represents the only well-motivated picture. But discontinuities would remain, even if the re-arrangements were incorporated. It will be recalled that it is not the case that this strategy is acceptable with all OBL NPs that have personal referents (see the discussion at the end of 4.2.4), so that the strategy appears to have its most serious discontinuities with the category OBL.

4.3.5 Conclusion

This section on Relativization has shown that Keenan and Comrie's account of relativization in Maori is rather sadly lacking in the data it considers, and this must raise questions about the completeness of their data on other less well known languages. When the full range of data for Maori is considered, a number of problems for their proposed universals appear; in particular, there appears to be some evidence of non-continuous strategies, even for the primary, or Su, strategy. It is further suggested that the definition they use of what constitutes different strategies may serve to hide problems with continuity of strategies, and the situation in Maori shows that there may be grounds to reject the idea that the positions on the AH represent categories that are treated uniformly with respect to relativization: DO (Su-strategy), OBL (pronoun-retaining-strategy), and GEN (ai-strategy, Su-strategy) are all somewhat suspect. It has also been shown that there are quite a number of factors other than NP position which influence the acceptability of relativization in Maori; they include tense-aspect, stativity (see the experience verbs), animacy, and phonological constraints, as well as features such as ease of comprehension. While Keenan and Comrie do not intend to imply that grammatical relations are the only relevant factor, it is nonetheless surprising that such a wide variety of other factors should play a part.

4.4 Direct Object

The category DO has not been defined within the context of Relational Grammar; there is nothing equivalent to Keenan's list

of subject properties, for instance. However, as this is a somewhat difficult category in Maori, it seems worthwhile seeing at least to what extent its syntactic properties can be established. In many older accounts of Maori, it is stated that the DO may be marked by either i or ki. We have seen above that, with respect to relativization, ki-phrases in general behave differently from i-marked DOs. In Relational Grammar, a particular grammatical relation can be posited for a particular language if there is a group of properties which sets certain NPs aside from others. In Maori, we have established a number of properties which are found only with Su NPs, such as the ability to float quantifiers, the control of ki te deletion, zero marking, etc. Thus the upper bound of the DO relation is established. This section will be concerned with the questions of whether there is a group of properties distinguishing DOs from IOs or OBL NPs, and whether both ki-marked and i-marked NPs of the kind usually considered to be DOs share sufficient of these properties to warrant classing them as bearing the same grammatical relation. Because there is no available characterization of the DO relation, it is inevitable that this examination of the DO relation will be less exhaustive than that for Subjects. It should nevertheless suffice to answer the questions that are of importance.

4.4.1 Position

In a transitive sentence with unmarked word-order, the i-marked NP normally directly follows the Su:

- (4413) Kei te whāngai a Rewi i ngā poaka
 at(pres) the feed pers Rewi prep the(pl) pig
 'Rewi is feeding the pigs'.

The same position is occupied by a ki-phrase:

- (4414) Kei te mihi ia ki te kōtiro
 at(pres) the greet he to the girl
 'He is greeting the girl'.

When we have both a notional indirect object and a notional direct object, the ordering depends to some extent on weight of constituent; thus we have

- (4415) Kei te pātai ia ki a Tamahae, "He aha tēnei?"
 at(pres) the ask he to pers Tamahae cls what this
 'He is asking Tamahae, "What is this?"

- but (4416) Kei te whakamārama ia i ngā kōrero
 at(pres) the cause-clear he prep the(pl) story
 paki ki ngā tamariki
 humorous to the(pl) children
 'He is explaining the funny stories to the children'.

This means, in general, that if both are prepositional phrases, the order is i-phrase + ki-phrase. It appears to be the case that two ki-phrases, one as DO and the other as IO, cannot co-occur in Maori. Note that other types of ki-phrases (i.e. those that are more directional and less IO-like) occur in the same position as notional IOs:

- (4417) Ka tuari haere ia i ngā ika ki
 unspec distribute move he prep the(pl) fish to
 ana whanaunga
 his(pl) relative
 'He distributed fish to his relations as he went along'

- (4418) Kei te kāta a Hata i ngā rīwai ki te pākoro
 at(pres) the cart pers Hata prep the(pl) potato to the shed
 'Hata is carting the potatoes to the shed'.

Examples containing a DO-type ki with a locative ki proved impossible to elicit, but this seemed to be because the verbs which take ki combine with i-locatives, rather than ki-locatives for semantic reasons. It is therefore uncertain whether the restriction is significant in connection with grammatical relations. However, a DO ki-phrase precedes an i-locative, e.g.

- (4419) Ka tūtaki ia ki a Atareta i tētahi kanikani
 unspec meet he to pers Atareta at(neut) a certain dance
 'He met Atareta at a dance'.

This suggests that a DO ki has the same positional relationship to other phrases as a DO i-phrase. However, since there are no attested examples with two ki-phrases, one of which is of the DO type, there appears to be some evidence that DO ki-phrases do not represent a distinct grammatical relation from other ki-phrases.

4.4.2 Case Marking

As mentioned above, certain verbs have i as DO marker, while others have ki. In most cases, a semantic reading of the ki-phrases as goals is intuitively satisfactory, (see e.g. 3.1.4), e.g.

- (4420) Ka tae katoa mai ana hoa ki te poroporoaki
 unspec arrive all hither his(pl) friend to the farewell
 ki a ia
 to pers he
 'All his friends arrived to farewell him'
- (4421) Ka whakamTharo rāua ki te torotika o aua rākau
 unspec cause-admire they(2) to the straight of those tree
 'They admired the straightness of the trees'.

There are some verbs which appear to have either i or ki. This has already been discussed in a different connection in 3.2.1. Amongst these are for instance rongo 'hear', rapu 'look for', pupuri 'keep'. There seems to be considerable disagreement with some of these as to whether they are semantically identical when they have i or ki phrases following, as in

(4422) Kua rongo a Rewi i a Tamahae e pātai ana
 perf hear pers Rewi prep pers Tamahae pro- ask -gress
 'Rewi heard Tamahae asking'

and (4423) Kore anō au e rongo ki te reo wahine e
 not again I non-pt hear to the voice woman pro-
 karanga ana
 call -gress
 'Never again will I hear women's voices calling in welcome'.

The question is discussed in some detail in an unpublished term paper by Anne Mark, written at M.I.T. with P. Hohepa as informant and supervisor. Since the paper is not published, no account will be taken of her analysis here, but the data is presumably to be accorded some status. However, my informants disagreed with some of the judgements, and the data presented here is revised accordingly. Amongst pairs of sentences differently glossed are:

(4424) Ka kapo au i te pū
 unspec snatch I prep the gun
 'I snatched the gun'

and (4425) Ka kapo au ki te pū
 unspec snatch I to the gun
 'I snatched at the gun',

where this accords with a reading of i as D0, and ki as a goal (not necessarily attained). The sentences Mark gives with rongo are glossed differently:

(4426) I rongo ia ki te reo o Hinewai
 past hear he to the voice of Hinewai
 'He listened to the voice of Hinewai'

but (4427) I rongo ia i te reo o Hinewai
 past hear he prep the voice of Hinewai
 'He heard the voice of Hinewai',

but the subsequent discussion says rongo i 'perception', rongo ki 'attempt to perceive', which is also in line with an i reading as D0 and a ki reading as (not necessarily achieved) goal. My informant glossed the first of these sentences as 'heard' (which fits with the original context), and was unsure whether 'heard' or 'listened to' was more appropriate for the second.

With pupuri,

(4428) Ka pupuri au ki te rākau
 unspec hold I to the tree
 'I held fast to the tree'

and (4429) Ka pupuri au i te rākau
 unspec hold I prep the tree
 'I held the tree',

subsequent glosses indicate that with ki the tree is considered as rooted in the ground, but with i, the tree is treated like a log. This fits again with the above distinction, but also allows a locative reading of ki. With rapu, the discussion of two sets of data is conflicting, but the following:

(4430) Ka rapu au ki te kōwhao o te tuna
 unspec look for I to the hole of the eel
 'I search/feel about in the eel's hole'

(4431) Ka rapu au i te kōwhao o te tuna
 unspec look for I prep the hole of the eel
 'I look for the eel's hole'

with the glosses provided by my informants could be accounted for with a locative ki.

(4432) Ka tūtaki a Hinemoa ki a Mere
 unspec meet pers Hinemoa to pers Mary
 'Hinemoa met Mary'

and (4433) (*)Ka tūtaki a Hinemoa i a Mere
 unspec meet pers Hinemoa prep pers Mary
 'Hinemoa met Mary',

are claimed by Mark to be distinguished thus: with ki, the meeting is known in advance, and the meeting there is not accidental, whereas with i, the meeting is accidental. This is contradicted by examples like

(4434) Kua tūtaki te pāhi ki te kau rā
 perf meet the bus to the cow there
 'The bus has met that cow',

from my own data. My informants rejected (4433), and did not find that (4432) was necessarily pre-arranged. Thus some doubt remains about the validity of the distinction between (4432) and (4433).

Finally, consider

(4435) Ka mōhio au i ngā pepeha o Waikato
 unspec know I prep the(pl) proverb of Waikato
 'I know the proverbs of Waikato'

- (4436) Ka mōhio au ki ngā pepeha o Waikato
 unspec know I to the(pl) proverb of Waikato
 'I know the proverbs of Waikato',

where the ki example is glossed further as "I-have learned of the existence of ...", whereas that with i, it is claimed, presupposes existence. My informants were somewhat doubtful of (4435), but felt that the most plausible reading was 'I knew/understood [it/that] because of/from the proverbs of Waikato'. This, then, is not the DO i. It is perhaps worth noting in addition that such verbs are not recorded by Williams as taking i in the dictionary, nor by Biggs.

It thus seems that in uncontroversial cases, we can legitimately regard the i-phrases as notional DOs, but the ki-phrases as notional goals, or movement locatives, like the other ki-phrases. This would account for the non-occurrence of a ki-DO and an IO, and it can therefore be concluded that the case-marker for DO is i only. This has some important consequences for the analysis of Maori relativization, since the Su strategy applies to these ki-phrases, but not to other OBLs, and the Su strategy must now be seen as skipping the DO slot entirely. Under this analysis, relativization is even more of a counter-example to Keenan and Comrie's claims than was suggested in 4.3.

4.4.3 Pronominalization

Both i-phrases and ki-phrases pronominalize, and ki-phrases that are notional IOs pronominalize too:

- (4437) Ka āwhina a Mere i a ia
 unspec help pers Mary prep pers he
 'Mary helped him'

- (4438) Ka pTrangi a Kupe ki a ia
 unspec want pers Kupe to pers she
 'Kupe desired her'
- (4439) Ka pātai te māhita ki a au, "..."
 unspec ask the teacher to pers I
 'The teacher asked me, "...".

Thus there is no distinction here amongst these NPs with respect to pronominalization under conditions of coreference.

4.4.4 Reflexivization

Both DOs and ki-phrases reflexivize under the control of the subject:

- (4440) Kei te whakapaipai a Mere_i i a ia_i
 at(pres) the cause-pretty pers Mary_i prep pers she_i
 'Mary is prettying herself up'
- (4441) Ka aroha a Marama_i ki a ia_i anō
 unspec sorry pers Marama_i to pers she_i self
 'Marama felt sorry for herself'
- (4442) Kei te pātai au ki a au, "..."
 at(pres) the ask I to pers I
 'I am wondering, "..."' (or 'asking myself').

Note, however, that ki-phrases of the DO-type require the emphatic marker, which distinguishes them from both i-phrases and notional IO ki-phrases.

4.4.5 Passivization

i-phrases can be passivized, as has already been demonstrated, e.g.

- (4443) Ka āwhinatia a Mere e Rewi
 unspec held-pass. pers Mary by Rewi
 'Mary was helped by Rewi'.

Ki-phrases with verbs like aroha, pTrangi, hiahia also passivize:

- (4444) ... me ngā mea katoa e pTrangitia ana e ia
 with the(pl) thing all pro- want-pass. -gress by he
 '... and all the things wanted by him'.

It also appears that at least some instances of IO-type ki-phrases can be passivized:

- (4445) Ka karangatia e ia ētahi tohorā
 unspec call-pass. by he some(pl) whale
 'Some whales were called by him',

derived from

- (4446) Ka karanga ia ki ētahi tohorā
 unspec call he to some(pl) whale
 'He called some whales',

where ki is certainly more usual than i in the active. However, the generality of this is not entirely clear, compare:

- (4447) ?Kua pātaia a Tamahae, "He aha tēnei?"
 perf ask-pass. pers Tamahae cls what this
 'Tamahae has been asked, "What is this?"'.

However, the following is grammatical:

- (4448) Ka pātaia te pātai ki a Tamahae, "..."
 unspec ask-pass. the question to pers Tamahae
 'Tamahae was asked the question, "...'

where the NP promoted to Subject is not the notional IO but the notional DO. In

- (4449) Kua whakamāramatia ngā tamariki ki ngā
 perf cause-clear-pass. the(pl) children to the(pl)
 tauriteritenga
 likeness
 'The children have been explained the likenesses'

the notional IO is promoted, but the marking of the notional DO is ki, indicating that some additional change in grammatical relations has occurred, cf.

- (4450) Kua whakamārama ia i ngā tauriteritenga ki
 perf cause-clear he prep the(pl) likeness to
 ngā tamariki
 the(pl) children
 'He explained the likenesses to the children'.

(4449) was rejected with i instead of ki. Bearing in mind the discussion of 3.2.4, it is worthwhile comparing this with:

- (4451) Kua whakaakona mātou ki te mahi †††
 perf cause-learn-pass. we(excl,pl) to the work mutton-bird
 'We were taught to go mutton-birding'.

Thus it would seem that passive is at least to some extent conditioned by surface marking. Passivization thus goes counter to the pattern shown in 4.4.2: it appears here that DO-type ki-phrases pattern undoubtedly like i-phrases, whereas passivization of IOs is at best sporadic. The conclusions in this section differ somewhat from those reached by Chung (1978, 170-174), who does not appear to have been aware of examples like (4449) and (4451).

4.4.6 Relativization

As we have seen there are problems concerning the relativization of DOs. However, those cases that clearly involve ki-phrases of the DO-type have Ø-marking relativization, e.g.

- (4452) E mTharo ana ahau ki ngā whakapapa e
 pro- marvel -gress I to the(pl) genealogy pro-
 maumahara ana a ia
 remember -gress pers he

'I am surprised at the genealogies he remembers',
 where the underlying structure of the relative clause is

- (4453) E maumahara ana a ia ki ngā whakapapa
 pro- remember -gress pers he to the(pl) genealogy
 'He remembers the genealogies'.

Note, however, that kite, which takes i, also relativizes by this strategy:

- (4454) He tino maha ngā mea whakamāharo i kite
 cls very many the(pl) thing wonderful past see
 rātou i taua rā
 they(pl) at(neut) that day
 'Very many were the wonderful things they saw that day'.

Thus the strategy applies to experience verbs, rather than to ki-marked NPs.

Relativization of ki-phrases with verbs like pītrangi, however, can involve ai:

- (4455) I moe ia i te wahine i pītrangi (ai) ia
 past marry he prep the woman past want pro he
 'He married the woman he wanted'.

Similarly, relativization of notional IOs can involve ai:

- (4456) Kāore te tamaiti i pātai (ai) te māhita i
 not the child past ask pro the teacher at(past)
 te whakarongo
 the listen
 'The child the teacher asked wasn't listening'.

As discussed in 4.3, i-marked DOs do not in general relativize directly. This distinguishes them from the other types of NP under discussion. Note, however, that for those speakers who accept relativization of DOs with ai, all these NPs behave much more like a single group.

4.4.7 Questioning

All these types of NP take the same form of questioning, i.e. substitution of a Q word, thus:

- (4457) Ka whāngai a Rewi i ngā aha?
 unspec feed pers Rewi prep the(pl) what
 'What did Rewi feed?'
- (4458) Ka pātai te māhita ki a wai?
 unspec ask the teacher to pers who
 'Who did the teacher ask?'
- (4459) Kei te pTrangi ia ki te aha?
 at(pres) the want he to the what
 'What is he wanting?'

Thus questioning does not throw any light on the matter in hand.

4.4.8 Ko

It appears likely that none of these types of NP can be fronted with ko:

- (4460) *Ko ngā poaka i whāngai a Rewi
 top. the(pl) pig past feed pers Rewi
 'It was the pigs that Rewi fed'
- (4461) *Ko Tamahae anake i ui te māhita
 top. Tamahae alone past ask the teacher
 'It was Tamahae alone the teacher asked'
- (4462) ?Ko te pounamu anake i pTrangi ia
 top. the greenstone alone past want he
 'It was the greenstone alone he wanted'.

However, judgements about (4462) were very much less certain than

those for (4460) and (4461). (4462) seemed considerably better than the others. Thus, as with relativization, the D0-type ki-phrases appear more subject-like than the other types under consideration.

However, kite with ko-fronting, e.g.

- (4463) *Ko te pounamu anake i kite ia
 top. the greenstone alone past see he
 'It was the greenstone alone he saw'

was rejected with apparent certainty, so that surface marking may also play a part.

4.4.9 Deletion under Co-reference: Victims

Firstly, co-ordinate deletion will be considered:

- (4464) *Ka haere mai te hipi, ka kuti a Hata
 unspec move hither the sheep unspec shear pers Hata
 'The sheep came, and Hata sheared [it]'
- (4465) *Ka whāngai a Rewi i ngā hipi, ā,
 unspec feed pers Rewi prep the(pl) sheep and then
 ka whiu atu a Tamahae
 unspec chase away pers Tamahae
 'Rewi fed the sheep, and then Tamahae chased [them] away'
- (4466) *Ka kite a Tamahae i te pounamu, ā,
 unspec see pers Tamahae prep the greenstone and then
 ka pTrangi ia
 unspec want he
 'Tamahae saw the greenstone, and wanted [it]'
- (4467) *Ka kite te māhita i a Tamahae, ā
 unspec see the teacher prep pers Tamahae and then
 ka pātai
 unspec ask

'The teacher saw Tamahae, and asked [him]'.
(This last example is possible, but not equivalent to the English.)

It thus seems likely that none of these can be victims of co-ordinate deletion.

Secondly, deletion under me will be considered:

(4468) *Ka whakaaro a Tamahae me āwhina a Hata
unspec decide pers Tamahae should help pers Hata
'Tamahae decided that Hata should help [him]'

(4469) *Ka whakaaro a Tamahae me pTrangi a Hata
unspec decide pers Tamahae should want pers Hata
'Tamahae decided that Hata should want [him]'

(4470) *Ka whakaaro a Tamahae me pātai a Hata
unspec decide pers Tamahae should ask pers Hata
'Tamahae decided that Hata should ask [him]'.
(Note: The original text has a stray dot after this example.)

It appears that the same pattern of rejections is obtained under kia as well. Thus none of the types of NP we are considering can be victims of deletion.

4.4.10 Controllers of Deletion

Firstly, co-ordinate deletion is considered:

(4471) *Ka kite a Tamahae i ngā hipī,
unspec see pers Tamahae prep the(pl) sheep
ā, ka whiu (ia)
and then unspec chase he
'Tamahae saw the sheep, and (he) chased [them]'

(4472) *Ka pTrangi a Tamahae ki te pounamu,
unspec want pers Tamahae to the greenstone
ā, ka hoko mai (ia)
and then unspec buy hither he

'Tamahae wanted the greenstone, and (he) bought [it]'

- (4473) *Ka pātai te māhita ki a Tamahae,
 unspec ask the teacher to pers Tamahae
 ā, ka whakahoki
 and then unspec cause-return

'The teacher asked Tamahae, and [he] replied'.

Thus none of these NP types can be the controller of co-ordinate deletion.

Secondly, control of deletion with kia is illustrated:

- (4474) Ka tono ia i ngā hēpara kia haere
 unspec order he prep the(pl) shepherd comp move
 'He ordered the shepherds to go'

- (4475) Ka pātai te māhita ki a Tamahae kia haere
 unspec ask the teacher to pers Tamahae comp move
 'The teacher asked Tamahae to go'.

There appears to be no verb which takes a DO-type ki and allows complementation with kia. This suggests that these again form a different group from the other types being considered.

4.4.11 Actor-emphatic

The i-phrase of a transitive sentence appears Ø-marked in the actor-emphatic, thus:

- (4476) Nā Rewi i whāngai ngā poaka
 by Rewi past feed the(pl) pig
 'Rewi fed the pigs'

- (cf. (4477) I whāngai a Rewi i ngā poaka
 past feed pers Rewi prep the(pl) pig
 'Rewi fed the pigs').

While some doubts remain as to the derivation of the actor-emphatic, it is certainly possible to claim that the NPs appearing with \emptyset -marking in the actor-emphatic are the set appearing with i in active transitives. The ki-phrases of experience verbs cannot appear thus:

- (4478) *Nā Rewi i pTrangi te kāwhe rā
 by Rewi past want the calf there
 'Rewi wanted the calf'.

Neither can notional IOs:

- (4479) *Nā Tamahae i pātai te māhita "He aha tēnei?"
 by Tamahae past ask the teacher cls what this
 'Tamahae asked the teacher "What is this?"'

Thus this property differentiates i-marked DOs from the other NPs.

4.4.12 Object Incorporation

This applies to the set of NPs that otherwise appear as DO i-phrases, e.g.

- (4480) Kei te hoko a Tamahae i ngā rare
 at(pres) the buy pers Tamahae prep the(pl) lolly
 'Tamahae is buying the lollies',

compare

- (4481) Kei te hoko rare a Tamahae
 at(pres) the buy lolly pers Tamahae
 'Tamahae is lolly-buying'.

It is not clear, however, whether it can apply to the ki-phrases with experience verbs, e.g. corresponding to

- (4482) Kei te kite a Rewi i ngā manu
 at(pres) the see pers Rewi prep the(pl) bird
 'Rewi is looking at the birds'

speakers disagreed about the possibility of

- (4483) ?Kei te kite manu a Rewi
 at(pres) the see bird pers Rewi
 'Rewi is bird-watching',

but corresponding to

- (4484) Kei te pTrangi a Rewi ki ngā wāhine
 at(pres) the want pers Rewi to the(pl) women
 'Rewi is wanting the women'

speakers accepted

- (4485) Kei te pTrangi wāhine a Rewi
 at(pres) the want women pers Rewi
 'Rewi is women-wanting'.

It appears that (4485) is unusual, and that (4483) is more typical of judgements in this area. This restriction is not determined solely by surface-marking, but by the class experience verbs. It does not apply to notional IOs; corresponding to

- (4486) Kei te pātai a Tamahae i ngā pātai
 at(pres) the ask pers Tamahae prep the(pl) question
 ki ngā māhita
 to the(pl) teachers
 'Tamahae is asking the teachers the questions',

there is no

- (4487) *Kei te pātai māhita a Tamahae i ngā pātai
 at(pres) the ask teacher pers Tamahae prep the(pl) question
 'Tamahae is teacher-asking the questions'.

Again, this property appears to distinguish i-marked DOs from the other NPs, although the distinction is not so clear-cut as to be a reliable test.

4.4.13 Conclusion

These appear to be the only grammatical processes which might conceivably refer to the grammatical relations DO and IO. As can be seen, they are not nearly as important as those that refer to Subject. However, it appears that certain rules, such as relativization, reflexivization and the actor-emphatic will have to refer to the grammatical relation DO, and it must thus be recognized for Maori. However, of the twelve properties considered, i-marked NPs differ in behaviour from ki-marked NPs in seven instances. In almost all the cases where similar behaviour is found (passive being a possible exception), there is no distinction between notional DOs and notional IOs. It must thus be concluded that with respect to the distinctive DO properties (position, case-marking, reflexivization, relativization, passive, ko-fronting), in the majority of instances i-marked phrases differ from ki-marked ones. It seems necessary, therefore, to conclude that the ki-phrases of experience verbs are not DOs.

However, it appears that sometimes rules are more sensitive to surface markings than to grammatical relations. The grammatical relation of the ki-phrases poses some problems, since with certain properties they appear more Subject-like, while in others they show the same kind of patterning as IOs, with which they share surface-marking. This calls into question the notion of a firm hierarchy of relations with discrete points, and thus the whole basis of relational grammar.

It seems likely, in fact, that the syntactic behaviour of these phrases can only be predicted by case-marking, which will determine that with respect to some processes they are treated as Subjects, with others as DOs, and with yet others as OBLs.

As a footnote to this section, it can be added that there is too little evidence available to be certain whether IO constitutes a distinct grammatical relation in Maori. It is not clear to what extent notional IOs passivize, for instance, and it must be borne in mind that mō-phrases also passivize. This, however, seems to be almost the only property on which they are potentially distinct from other OBL NPs (the situation with relativization is also unclear, see 4.3.2.3), and it thus seems likely that IOs are treated as OBLs in Maori.

4.5 Passive

It has been suggested by many authors that passivization in Maori is untypical when compared with passivization in other languages. Given Keenan's attempt (1975) to characterize some universal properties of passive, it is worthwhile to consider to what extent this feeling is supported.

(1) We have argued above that it must be considered derived in Maori. It is thus a promotion to Su rule, with the effect of demoting the former subject. (E-phrases, for instance, relativize with ai, if at all, an indication of their chômeur status.)

(2) The first irregularity about the passive in Maori is the marker it uses for the demoted subject, e, which appears to be unrelated to any other particle(s) in Maori, whereas the commonest markers cross-linguistically are locative or instrumental. Maori has an abundance of potential candidates, but they never occur.

(3) Passive sentences in Maori are intransitive: they do not possess an NP with the characteristics of the DO, and frequently have only one NP.

(4) The promoted Su gains the coding properties of the demoted Su (and many behavioural properties as well).

(5) Passive in Maori is a movement transformation, since unmarked word-order has the NPs in the opposite order to that of the active. There is no apparent motivation for a derivation involving either Raising or Equi, since there is no higher verb, and no auxiliary which might call for such an analysis.

(6) Reflexivized sentences cannot subsequently undergo passivization:

(4488) Ka whakapaipai a Mere_i i a ia_i
 unspec cause-pretty pers Mary_i prep pers she_i
 'Mary prettified herself'

cannot become

(4489) *Ka whakapaipaitia ia_i e Mere_i
 unspec cause-pretty-pass. she_i by Mary_i
 'She_i was prettified by Mary_i'.

(7) One of the untypical aspects of the Maori passive is that it seems little influenced by the semantic role of the NPs.

Keenan states (1975, 345) that

PASSIVE is harder to apply if the Su is not an agent and the DO is not a patient.

However, consider

(4490) Kua kauhoetia e ia te awa
 perf swim-pass. by he the river
 'The river was swum by him'

and (4491) I pōkia te rangi e ngā kapua
 past cover-pass. the sky by the(pl) cloud
 'The sky was covered by the clouds'.

In the first of these, the underlying DO is not a patient, but rather some sort of locative, and in the second, the DO is likewise a locative, and in addition, the underlying Su is not an agent. They are not, however, in the least unusual in Maori.

(8) Another "oddity" about the Maori passive is that it is not obviously "stative" as passives in many languages are. Though there is some doubt as to what constitutes stativity, the fact that passives are normal imperatives, and that they occur so frequently in narrative suggests that they are not stative.

Thus, given Keenan's list of passive properties, it appears that the main "oddities" of the Maori passive concern its widespread use, and it thus appears that its unusual character has been exaggerated.

4.6 Conclusion

We have shown that the grammatical relation Su appears to be involved in a number of syntactic processes in Maori, but that the grammatical relations further down the hierarchy have minimal support. We have also shown that data from such areas as questioning and relativization in Maori pose severe problems for both the RH and the AH, in that the predictions the theories make about accessibility and continuity of strategies are not found to hold true. Thus it appears that Maori cannot be fitted neatly into such a model of grammar.

However, it seems clear from the number of interesting and

important generalizations that have come to light in the course of this investigation that the type of question which this approach to grammar forces us to ask is extremely fruitful. As Schachter says (1977b, 707):

One question worth asking in evaluating a grammatical theory is how much the theory 'buys' for the practicing grammarian. Does the theory point the grammarian in useful directions, leading him or her to the discovery of non-obvious facts about the grammatical system being investigated, or does the theory lack this kind of heuristic potential? Clearly other things being equal, a theory that gives the grammarian some valuable leads is to be preferred to one that does not.

Judged by this criterion, Relational Grammar has proved its worth with respect to the grammar of Maori.

5.0 Stocktaking

As Chapters 3 and 4 have demonstrated, both case grammar and relational grammar appear to have insights to offer as far as the structure of Maori is concerned. It seems that, in particular, case grammar has useful generalizations to offer concerning the oblique NPs, while it appears that a number of syntactic processes make reference to the grammatical relations of Subject and Direct Object. At the same time, it seems that the lower positions on the hierarchies of grammatical relations are not of great importance in the grammar.

If a grammar requires both case relations and grammatical relations, there are at least three logically possible ways they might be related. Firstly, the two kinds of relations might be presumed equally basic, and NPs assigned both kinds of relation simultaneously. This would necessitate that the two were independent, and thus, for example, all case relations should have equal potential for appearing as Subject. This, however, does not seem to be true of any language which has been subjected to a case grammar analysis. While there are exceptions in languages classified as ergative, the most commonly found situation is that the unmarked choice for Subject is Agent, with other case relations following in fairly consistent orders: Instrument, Neutral ... It therefore seems that this first position must be rejected.

Secondly, grammatical relations might be presumed basic, and case relations assumed to be dependent on them. It is not clear whether this is the position that would be taken by adherents of Relational Grammar or not, since they have not discussed case relations. However, this

position can presumably be rejected using the kinds of argument presented at the beginning of Chapter 3 as reasons for the necessity of case grammar: the grammatical relation Subject apparently neutralizes a variety of case relations, in such a way that semantically important information cannot be recovered from Subject alone. It would seem that case relations are not, therefore, dependent on grammatical relations.

Thirdly, the dependency between the relations might proceed in the opposite direction, so that case relations are basic, and determine grammatical relations. This is the only position which has received support in the literature, and indeed appears to be the only supportable position. There are at least three scholars who have adopted this stance: Fillmore (see e.g. Fillmore, 1977), Anderson (see e.g. Anderson, 1977) and Dik (see e.g. Dik, 1978). It is possible that Relational Grammarians might also adopt this stance (see e.g. Comrie's remarks quoted below). Anderson suggests (1977, 189) that what distinguishes Relational and Case grammars is the point at which grammatical relations are introduced:

... it is appropriate to define a relational grammar, from the viewpoint of a case grammar, as one in which subject-formation is prior to all (other) syntactic transformations.

Dik's Functional Grammar, which does not use transformations, cannot be assessed as either case or relational by this criterion, however.

It is not possible here to provide a thorough evaluation of these various proposals in relation to each other, since such an evaluation would presuppose a satisfactory analysis of Maori in a case grammar framework, and the inadequacies of Fillmore, Anderson and Dik have been discussed in Chapter 3. However, a brief exploration of the kind of evidence Maori might provide for such an evaluation seems in order.

To present this, it is necessary to choose one of these proposals as the framework for discussion. Neither Fillmore nor Relational proposals are explicit enough in the relevant respects to serve this purpose.

Anderson (1977) proposes that Subject is determined by the case ergative, which accordingly is assigned to all NPs to become subjects, either on its own, or in conjunction with other cases. This is not always well motivated, even for English; for example the assignment of [loc, erg] to the Subject of know in Many people knew that book is introduced thus (Anderson, 1977, 44-45):

Let us, for example, introduce a C[ase] R[elation] the presence of which by itself characterizes agentives, so that the subject in (11.b) John opened the door, displays this relation, with which we can associate the imperativization etc. phenomena discussed in 1.3. Let us label this relation, to avoid confusion, ERG[ATIVE]. Suppose that the subject of (63) [Many people knew that book] is also associated with this underlying relation, but this time in conjunction with some other CR ... Occurrence in a by-phrase in a 'passive' and subject-position in the corresponding 'active' can then be allowed for uniformly in terms of the occurrence of erg.

I can find no discussion of semantic motivation, of the kind that seems appropriate if ergative is indeed a case relation here, rather than an arbitrary syntactic feature. There seems no obvious reason why, for instance, the argument should not be turned around so that loc, which characterizes know is the feature added to the subject of open, on which the mentioned occurrences depend. This could be made to work, counter-intuitive though it is. If erg is more than an ad hoc syntactic feature, then the semantic associations should be relevant.

Now there is at least one class of predicates in Maori where the feature ergative seems to be excluded from occurring with the Subject NP, and that is the statives, which, it will be recalled, are evidently basic, and which may be associated with another NP which might at least sometimes

be classified as ergative. In this situation, Anderson's proposals seem unacceptable. Since he is committed to just those cases he proposes, no obvious, non-ad hoc solution seems possible within his framework.

That leaves Dik's proposals, and while it was shown in 3.3 that his proposals are also highly problematic with respect to Maori statives, he is not committed to the rightness of his case system, and thus some solution to these problems is possible within his framework. Dik uses the feature Subj(ect) in a way not unlike Anderson's *erg*, and this does not give rise to the same kind of objection. Dik's proposals are unfortunately not explicit in one crucial respect: the basis for subject selection in predications other than 'actions' (see 3.3), but this does not prevent us from using his proposals for our purposes here. Accordingly, Dik's outline will be used as the basis for the discussion. It must be noted that his position is possibly neutral between Anderson's and that of Relational Grammar as characterized by Anderson.

5.1 The Need for Case and Grammatical Relations

Dik's grammar is outlined briefly here in its relevant aspects. Verbs are subcategorized according to the case relations they enter into. (The case relations proposed by Dik were discussed briefly in 3.3, and criticized. However, it would be possible to alter the details of case relations without altering the outlines of the theory, and so this criticism does not render Dik's general proposals less interesting. To avoid confusion, Dik's case framework is used in this section; 3.3 serves to justify the need to look at earlier case grammar proposals, even if it is concluded that an approach similar

to Dik's is likely to prove the most fruitful.) Thus eat is specified as requiring an Agent and a Goal, which have further semantic restrictions: the Agent must be animate, and the Goal must qualify as food. Dik's grammar thus generates formal objects of the following kind (1978, 29):

$$\text{eat}_v (x_1: \text{animate } (x_1))_{\text{Ag}} (x_2: \text{food } (x_2))_{\text{Go}}.$$

NPs for x_1 and x_2 are generated by means which do not concern us here (see Dik, 1978, Chapter 4), and lead to objects like

$$\text{eat}_v (dx_1: \text{John } (x_1))_{\text{Ag}} (dx_2: \text{sandwich } (x_2))_{\text{Go}}$$

i.e. some definite person, John, does the eating, and some definite food, the sandwich, is eaten. Such an expression underlies both

John ate the sandwich

and The sandwich was eaten by John.

Dik proposes that case relations form a hierarchy called the 'Semantic Function Hierarchy' (SFH) (1978, 70):

Ag Go Rec Ben Instr Loc Temp,

which determines the assignment of grammatical relations or functions, such that the least marked subject assignment is to the highest semantic function on the hierarchy, the least marked object assignment is to the next highest, given that Ag is never a candidate for Obj. Dik defines Subject (1978, 71) as determining "the perspective from which the state of affairs is described", and the Object as determining a second perspective in relation to remaining arguments. This association of Subject and Object with perspective is very similar to the position taken by Fillmore in his most recent return to the matters of case grammar (Fillmore, 1977, 72-73). After least marked assignment of grammatical functions, the predicate with eat would have the following form:

$$\text{eat}_v (dx_1: \text{John } (x_1))_{\text{Ag Subj}} (dx_2: \text{sandwich } (x_2))_{\text{Go Obj}},$$

which underlies the first of the sentences above, while a marked Subject assignment:

eat_{v, pass} (dx₁: John (x₁)) Ag (dlx₂: sandwich (x₂)) Go Subj

underlies the second. Subsequently, ordering rules, which take account of a variety of factors other than grammatical relations, place the verb and the nominal arguments into the linear order required by the language in question. (This is an advantage over other proposals made in case grammars, which assign a linear ordering on the basis of grammatical and case relations alone, and alter it again if required (e.g. as for questions).

Dik cites facts from a number of languages which, he claims, show the need for both case and grammatical relations in the grammar. One of the examples he cites concerns Maori, where his source is Chung's writings. The argument (1978, 119f) concerns ki te complementation, which he claims, following Chung, requires the potential candidate for deletion to be both subject and agent in the clause to be embedded. The argument involves the passive, statives, and experience verbs, whose Subjects are not Agents. Thus while

(5001) Ka whakaaro ia ki te whakaako i tana tamaiti
 unspec decide he to the cause-learn prep his(sg) child
 'He decided to teach his child'

is grammatical, since the underlying Subject of whakaako is an Agent, the following is not

(5002) *Ka whakaaro ia ki te whakaakona (ia)
 unspec decide he to the cause-learn-pass. he
 e tōna tupuna
 by his(sg) ancestor
 'He decided to be taught by his ancestor'.

Here, the subject of whakaakona is Goal (in Dik's terms), not Agent, and so ki te cannot be used as the complementizer. Kia is required:

- (5003) Ka whakaaro ia kia whakaakona ia e
 unspec decide he comp cause-learn-pass. he by
 tōna tupuna
 his(sg) ancestor
 'He decided to be taught by his ancestor'.

Apparently, the same thing applies if an experience verb is embedded.

Thus the following is ungrammatical:

- (5004) *Ka pTrangi ia ki te kite i ōna mātua
 unspec want he to the see prep his(pl) parent
 'He wanted to see his parents',

kia being required:

- (5005) Ka pTrangi ia kia kite i ōna mātua
 unspec want he comp see prep his(pl) parent
 'He wanted to see his parents'.

Similarly,

- (5006) *Ka pTrangi ia ki te mōhio ki te kōtiro rā
 unspec want he to the know to the girl there
 'He wanted to know the girl there'

- (5007) *E tūmanako ana ahau ki te rongo i te
 pro- hope -gress I to the hear prep the
 tangi o ngā manu
 sound of the(pl) bird
 'I am hoping to hear the sound of the birds'

- (5008) *Ka pTrangi ia ki te wareware ki te ...
 unspec want he to the forget to the
 'He wanted to forget the ...'

If the restriction is correctly stated, embedding of statives should be ungrammatical. They are, however, not clearly so.

(5009) ?Ka pTrangi ia ki te mate
 unspec want he to the dead
 'He wants to die'

(5010) Ka hiahia ia ki te riri
 unspec desire he to the angry
 'He wants to be angry'.

The second was accepted, apparently without reservation, and some speakers accept (5009), claiming that it is semantically distinct from kia complementation. The Subjects of these verbs are unlikely to be Agents, and thus it appears that Maori does not in fact provide clear evidence of a rule which must be stated in terms of both Subject and Agent. (Note also that intransitives can be embedded freely under ki te, though it is at least questionable that they would necessarily have the Agentive case-marking required.)

An examination of the subject properties indicates that another rule which might have such a restriction is the actor-emphatic. The verb in this construction is never an experience verb or a stative verb, and never passive. However, the rule does not apply to intransitives, but only to canonical transitives, which suggests that it cannot properly be stated in terms of the conjunction of Agent and Subject either. Nevertheless, some of Dik's evidence from other languages seems likely to hold, and this may be an argument in favour of Functional Grammar over Relational Grammar. However, Comrie suggests in his review of Dik that (1979, 271):

Within Relational Grammar, the main concentration of effort has been towards the role of syntactic functions in syntactic rules. It is not clear whether the main proponents of

this theory would accept stating syntactic rules at least partially in terms of semantic functions, and, if not, how they would analyze examples like those presented above ... The addition of this possibility would not require any substantial reformulation of the overall theory of Relational Grammar, i.e. it would be a straightforward addition to the theoretical apparatus already available, rather than a modification to the existing theoretical apparatus, and is probably a necessary addition irrespective of one's evaluation of other differences between Relational Grammar and Functional Grammar.

Evidence of this kind would be the strongest kind of evidence for the point of view under consideration here. It might be claimed that the distribution of he was to be accounted for as being restricted to e.g. Goal Subj, or perhaps to non-Agent Subj, but this seems problematic with respect to intransitives: if they count as Agents for the ki te rule, but not for the actor-emphatic or he rules, then inconsistency is involved. It is not clear whether he is allowable in the Subjects of experience verbs:

- (5011) ?Ka mōhio he tangata ki te tamaiti rā
 unspec know a man to the child there
 'A man knows that child'
- (5012) ?Ka kite he tamariki i te kaiā
 unspec see some children prep the thief
 'Some children saw the thief'.

In fact, it is not at all clear how the restrictions on he are to be accounted for, since neither case nor grammatical relations, nor any clear conjunction will capture the generalization (assuming that there is one to capture).

Thus Maori appears not to provide any strong evidence for the necessity of incorporating both case relations and grammatical relations, and the justification must remain as stated in 5.0:

there are a lot of properties which apply to Subjects only, regardless of their case. There are some properties which apply to Objects only, regardless of their case. The distribution of certain prepositions, notably i and ki cannot be accounted for in terms of grammatical relations, but can be captured in terms of case relations.

The distribution of labour between the two kinds of relation is worthy of a little more comment. Dik, Anderson and Fillmore all work with systems which recognize only two grammatical relations, Subject and Object. Dik explicitly rejects (1978, 73) the need for further grammatical relations, and Anderson (1977) devotes a good deal of space to arguing that Indirect Object (as proposed by Postal and Perlmutter) leads to difficulties in the description of English, at least. There is very little evidence that grammatical relations other than Subject and Object have any significant role to play in the grammar of Maori. It was suggested in 4.5 that Indirect Objects are indistinct from Oblique NPs (and, more generally, Bernard Comrie has expressed his doubts (personal communication) as to whether Indirect Objects are ever distinct; he suggests that they sometimes fall together with Obliques, and sometimes with Direct Objects). The grammatical relation Oblique does not seem to be one referred to by the grammar. Note that there is variation in the behaviour of Obliques with respect to Relativization, for instance. The relation GEN was shown to be problematic for Relativization, since some types of GEN could not be assigned with any certainty to that category. The OCOMP relation appears to behave like an OBL in Maori (as also in English) in so far as it

is referred to at all. On the basis of this, it would seem that the type of framework suggested by Dik includes those grammatical relations which are important, and does not invoke relations which are of little or no value. For this reason, it seems that Relational Grammar is to be rejected in the form in which it has been elaborated.

On the other hand, it is interesting to note that the case relations which proved the most controversial in Maori were those which would be placed highest on hierarchies of cases, notably Agent, Instrument and perhaps Neutral (note that Dik does not have just one case corresponding to this). The case relations which appear most likely to be useful in a description of Maori syntax are those which distinguish various kinds of Oblique NPs, such as locative, source and goal, where their contribution seems largely semantic, the syntactic consequences attendant upon the choice of one rather than another being very limited. Despite this kind of pattern, most attention in the past has been devoted to the cases at the top of the hierarchy. It seems at least worthwhile considering whether this is not because of the very high correlation in the more familiar Indo-European languages if nowhere else, between Agent and Subject, Neutral and Direct Object. In Maori, on the other hand, where the correlation is not as strong, the predictions and generalizations that can be made in terms of the higher cases are fewer in number, and it is the grammatical relations which assume the greatest importance. (Hajičová, 1979, reaches a similar conclusion concerning the relative value of Subject and Agent starting from a very different point of view, and using

unrelated data.) Such a suggestion cannot, of course, be evaluated before a workable set of cases is available, but it nevertheless provides a good deal of food for thought. It must also be pointed out that it is the local cases which are of importance in showing the relation between tense in Maori and spatial location, and a unified account of these two areas could be obtained by a theory which only had the cases locative, source and goal.

5.2 In Which Nothing is Concluded

It is hoped that this exploration of some aspects of Maori syntax has done two major things. Firstly, that it has led to some new insights into the structure of the Maori language, by asking for more explicit and detailed descriptions than previous studies. Secondly, that it has contributed a little to the further understanding of the nature of language, by providing some new data against which linguistic theories may be tested, and perhaps by giving some new perspectives against which they can be evaluated. It is in the very nature of such work that nothing can be concluded: there are always other aspects of the language waiting to be described, and other bodies of data which must be considered before the final evaluation of a description or theory can be made. While it appears from the evidence examined here that a proposal such as Dik's has many advantages, and deserves the most serious attention from linguists, even the small body of data considered here points to the need for revisions; but revisions cannot reasonably be made on the basis of data from one language alone. Only on the basis of many endeavours such as this can linguistics progress towards

its ultimate aim of providing an adequate description of natural language.

Nāu te rourou, nāku te rourou, ka ora te manuhiri;
nāu te rākau, nāku te rākau, ka mate te hoariri.

APPENDIX A

GLOSSING ABBREVIATIONS

The following is a list of the abbreviations used in the glosses. Where appropriate, the reference for the section discussing the gloss is given.

<u>Abbreviation</u>	<u>Meaning</u>	<u>Reference</u>
adnom	adnominal	
ag	agent	
cls	classifying	2.4.5.2
comp	complementizer	2.5.2
compar	comparative	
eq	equative	2.4.5.1
excl	exclusive	2.2.1
fut	future	
-gress	(pro-)gressive	2.3.4.4
habit	habitual	2.3.4.5
imp	imperative	2.4.2
incl	inclusive	2.2.1
narr.	narrative	2.3.1
neut	neutral	3.1.7
nom	nominalization	2.2.5
non-pt	non-past	2.3.4.3
num	numeral	
ord	ordinal	
pass.	passive	2.3.8; 2.4.7
perf	perfective	2.3.4.5
pers	personal marker	2.2.3.5

<u>Abbreviation</u>	<u>Meaning</u>	<u>Reference</u>
pl	plural	
poss	possessive	2.2.4
prep	preposition	2.1.3
pres	present	
pro	pro-form	2.5.5
pro- -gress	progressive	2.3.4.4
sfx	suffix	
sg	singular	
top.	topicalizer	2.4.6
unspec	unspecified tense	2.3.4.4
voc	vocative	2.4.2
2	dual	2.2.1

APPENDIX B

UNTRANSLATED WORDS

The following list provides definitions (or explanations) of Maori words unglossed in the examples. The definitions have been compiled with the aid of Williams's Dictionary of the Maori Language and Heinemann's New Zealand Dictionary.

<u>haka</u> :	a ferocious challenging dance accompanied by a chant.
<u>hangi</u> :	an earth oven, consisting of a circular hole in the ground, in which food is cooked by heated stones; the contents of the earth oven; a communal meal cooked in an earth oven.
<u>kumara</u> :	<u>Ipomoea batatas</u> , sweet potato.
<u>marae</u> :	the courtyard of a Maori meeting house which is the centre of tribal life.
<u>pa</u> :	a tribal settlement, usually fortified; the inhabitants of the settlement.
<u>puha</u> :	a sow-thistle boiled as a vegetable.
<u>rewarewa</u> :	<u>Knightia excelsa</u> , also called New Zealand honeysuckle - a native forest tree with conspicuous red flowers, poplar-like in appearance.
<u>taniwha</u> :	a fabulous monster, supposed to reside in deep water.
<u>tohunga</u> :	a skilled person; a wizard or priest.

APPENDIX C

SOURCES OF MAORI DATA

The following texts are the sources of the data which formed the basis of this study. For many of them, full bibliographical details are unavailable.

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